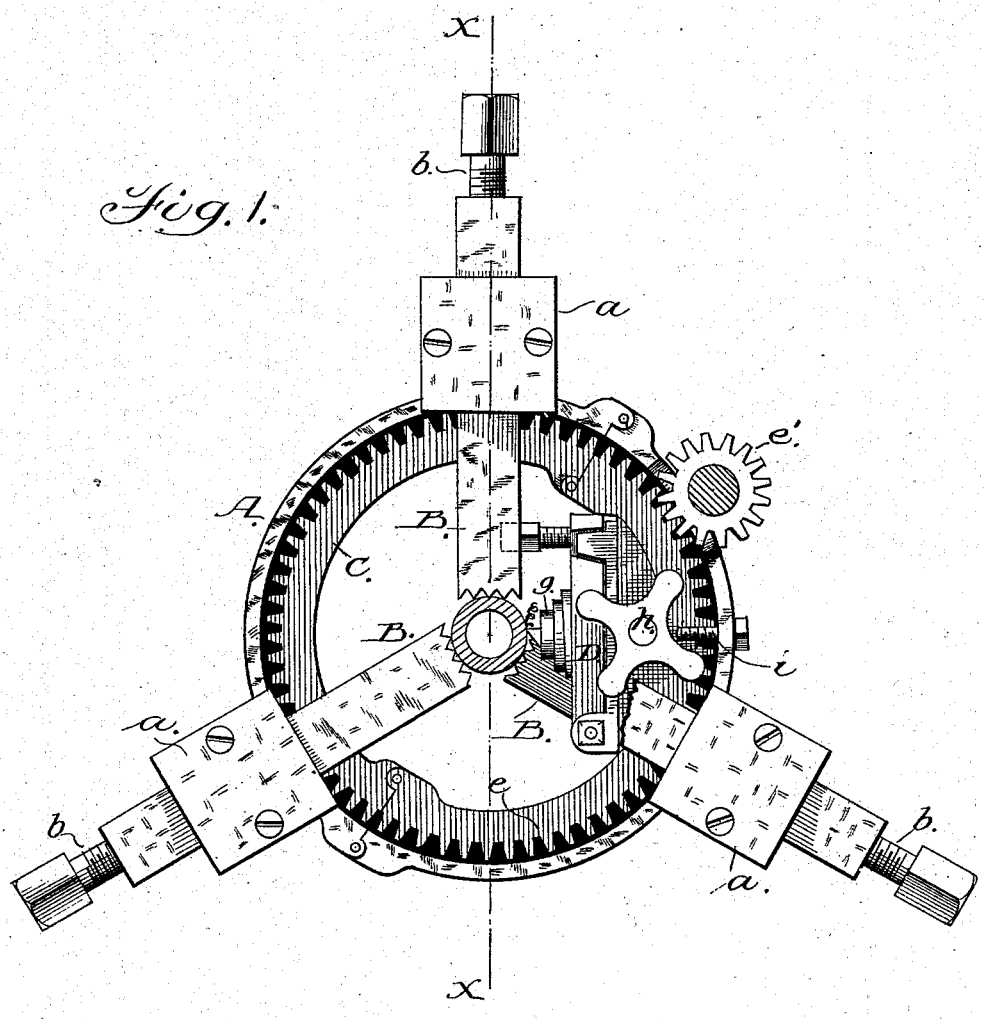
(No Model.) 5 Sheets—Sheet 1.

L. B. GREER.

WRIST PIN TURNER.

No. 258,053. Patented May 16, 1882.

Fig. 1.



Witnesses;
Walter Fowler,
Warren Parsons.

Inventor;
Langlin B. Greer
by A. H. Evans & Co
Attys.

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Fig. 2

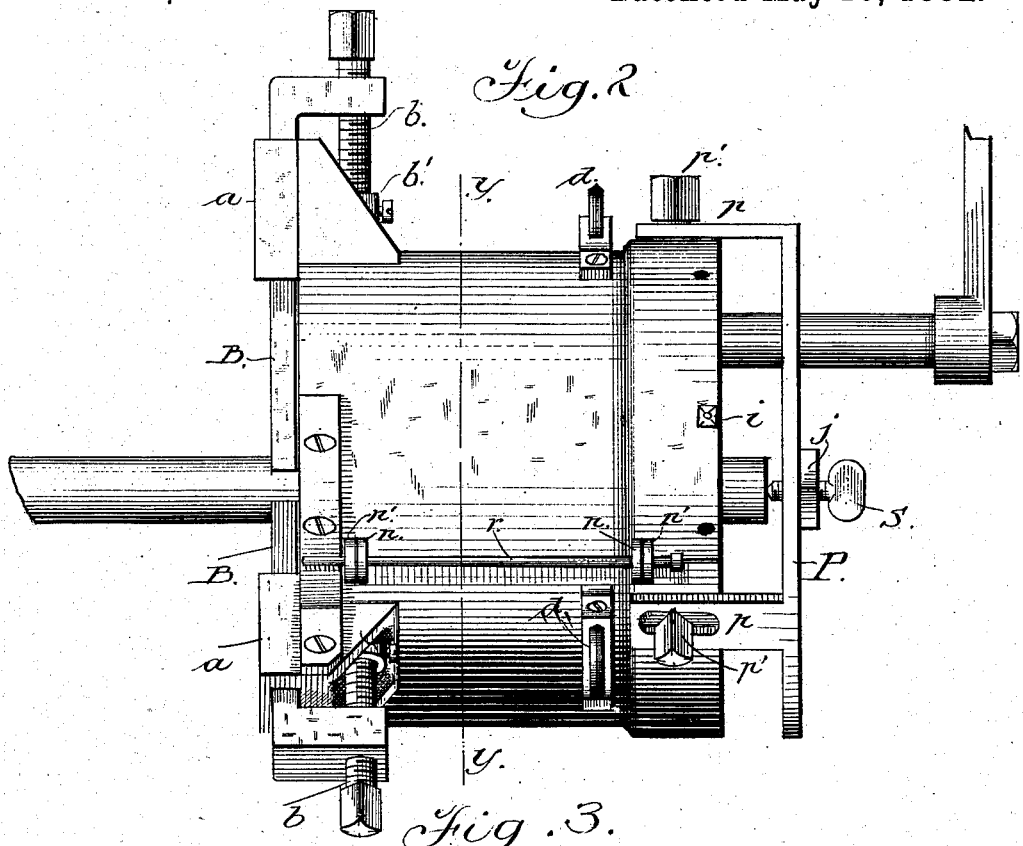
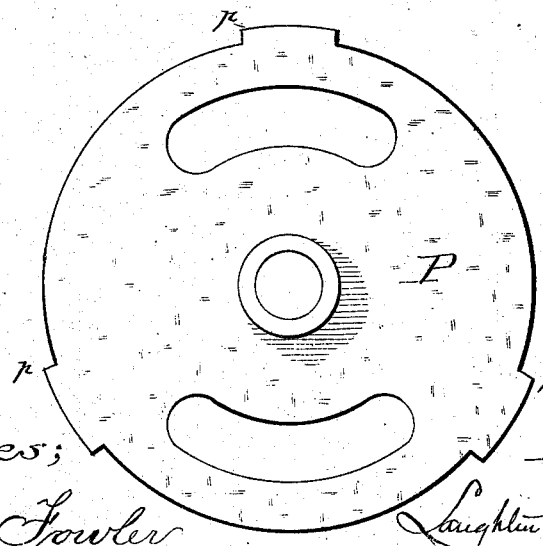


Fig. 3.



Witnesses;
D. Walter Fowler
Warren Parsons.

Inventor;
Laughlin B. Greer
by
A. H. Evans & Co.
Attys

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L. B. GREER.

WRIST PIN TURNER.

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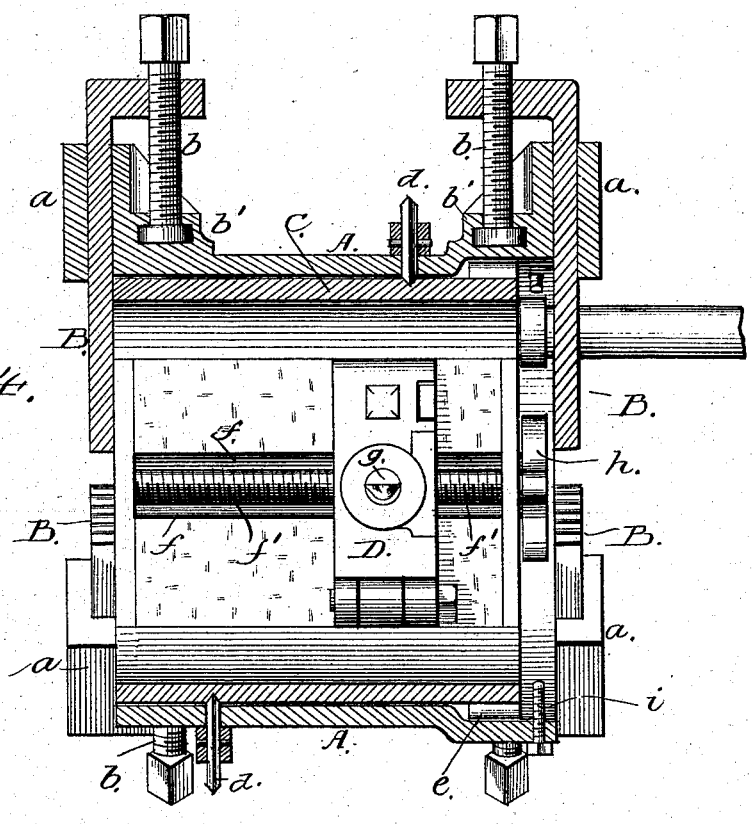
Fig. 4.



Witnesses;
D. Walter Fowler.
Warren Parsons.

Inventor;
Laughlin B. Greer
by his attys
A. H. Evans & Co

(No Model.) 5 Sheets—Sheet 4.

L. B. GREER.

WRIST PIN TURNER.

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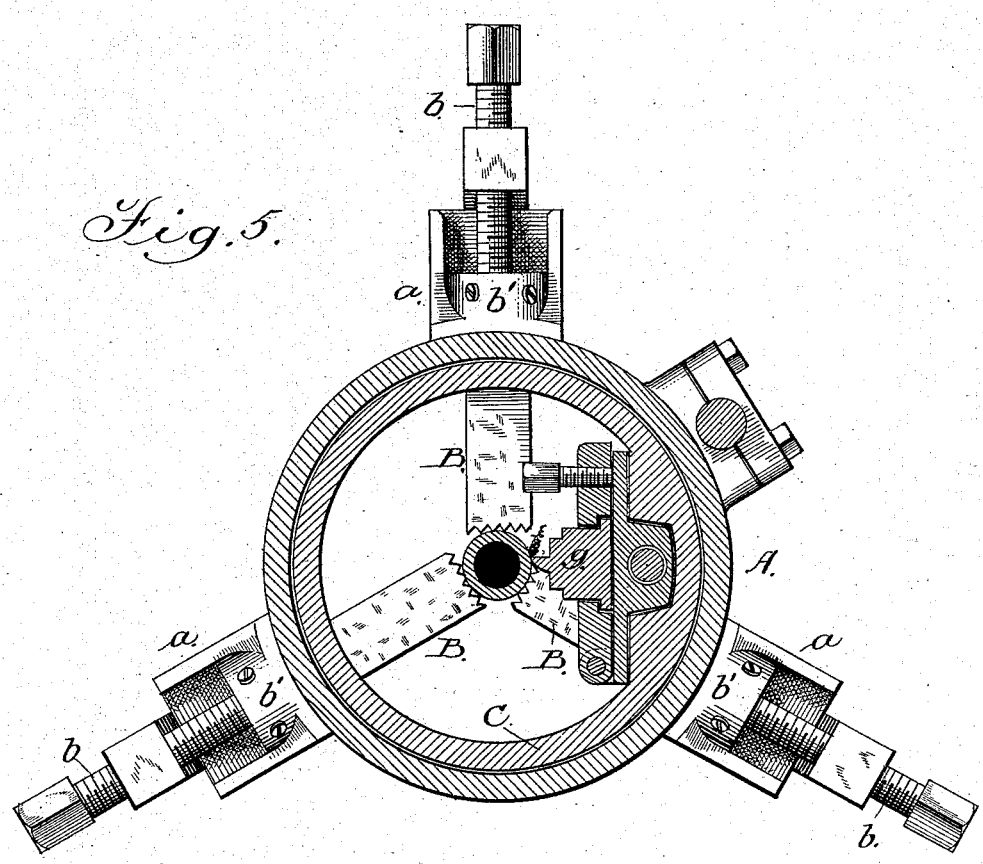
Fig. 5.



Witnesses;
Walter Fowler.
Warren Parsons.

Inventor:
Laughlin B. Greer
by
A. M. Evans & Co.
Attys.

(No Model.) 5 Sheets—Sheet 5.

L. B. GREER.

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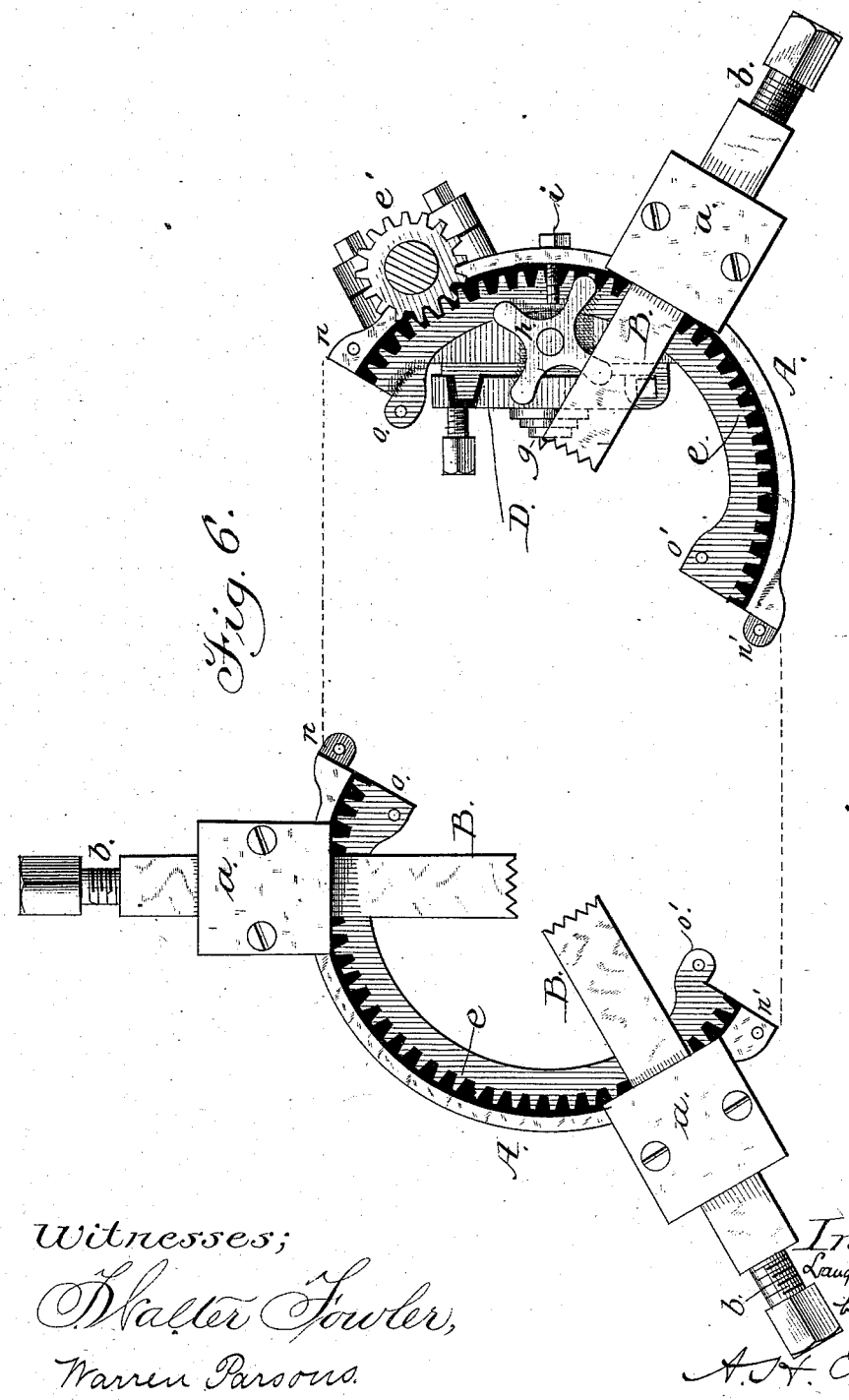

Witnesses;
Walter Fowler,
Warren Parsons.

Inventor;
Laughlin B. Greer
by his attys
A. H. Evans & Co

UNITED STATES PATENT OFFICE.

LAUGHLIN B. GREER, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO CHARLES W. HAYES, CHAUNCEY F. GREER, AND MARCUS GREER, ALL OF SAME PLACE.

WRIST-PIN TURNER.

SPECIFICATION forming part of Letters Patent No. 258,053, dated May 16, 1882.

Application filed December 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, LAUGHLIN B. GREER, of the city and county of Washington, and District of Columbia, have invented certain Improvements in Wrist-Pin Turners; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an elevation of the end of the wrist-pin turner. Fig. 2 is a side elevation with a centering attachment on one end. Fig. 3 is a view of the centering attachment. Fig. 4 is a longitudinal sectional view on the line *x x* of Fig. 1. Fig. 5 is a vertical cross-section on the line *y y* of Fig. 2. Fig. 6 is an end elevation, showing the sections of the wrist-pin turner separated.

My invention relates to wrist-pin turners, and is particularly designed for turning off and truing up the ends of shafting, crank-pins, and other similar work without removing the work from its position.

From time to time the bearing-surfaces of all heavy shafting and similar mechanical devices become irregular from unequal wear. It then becomes necessary to remove them from their positions and convey them to a workshop provided with sufficiently heavy machinery to return the bearing-surfaces to a true cylindrical form. The removal and handling of the shafting or like devices is an exceedingly expensive and tedious operation, involving an expense enormous compared with the actual expense of the turning proper.

The object of my invention is to avoid all the expense of time, money, and trouble incident to the removal of the class of work named to the shop, and to provide a means whereby it can be successfully done without removing the work from its position.

My invention consists in the combination and arrangement of parts, substantially as hereinafter more fully set forth and claimed.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A is a cylinder provided at its ends with boxes *a a*, through the ends of which pass chuck-bars B B, approaching the center of the cylinder, and designed to hold the work. The position of the chuck-bars is controlled by means of screws *b b*, having their end bearings in boxes *b' b'*.

Within the cylinder A is a tool-carrying cylinder, C, having bearings on friction-rollers *d d*. I provide one end of the cylinder C with a cogged flange, *e*, which meshes with a pinion, *e'*, journaled in boxes on the end of cylinder A. Lengthwise of cylinder C, I cast a table having a plane face on a chord of the arc, and locate within a groove, *f*, in it an endless screw, *f'*, which carries a tool-carriage, D, which is of any ordinary construction, adapted to carry a cutting-tool, *g*. On the end of the endless screw *f'* where it projects from cylinder C is a sprocket-wheel, *h*, the projecting arms of which are adapted to strike against any number of screw-pins, *i*, projecting through cylinder A in the line of its travel, as cylinder C is rotated by means of power applied to turn pinion *e'*. Any number of these pins may be applied through holes provided for the purpose, so as to increase or diminish the rapidity of feed, and the extent to which the pins are made to project toward the center determines the amount of movement given the screw at each impact of the wheel against a pin.

In turning the end bearings of shafts, in order that the feed of the cutting-tool may be carried to the extreme end of the work, I provide a removable centering-plate, P. (See Fig. 3.) This plate is circular, corresponding in diameter to the wrist-pin turner, and is provided with slotted arms *p p*, projecting at right angles to it, whereby it is secured to the end of the wrist-pin turner by means of bolts *p' p'*. (See Fig. 2.) At its center plate P is tapped to receive a screw, S, provided with a jam-nut, *j*, and a tapered or conical point. In placing work in position with this centering-plate the chuck-bars at one end of the lathe are made to grasp the shaft, and then the tapering end of screw S is forced into the "center hole" of the shaft and screwed up. The conical shape of the center hole and the tapering point of screw S force the axial line of the shaft or

other work into a line identical with the axial line of the wrist-pin turner.

In very many instances shafting is so located that the wrist-pin turner, so far described, could not, for the want of room, be passed over the end of the shaft. To obviate this difficulty I construct the cylinders A and C of two sections each, (see Fig. 6,) and provide them with overlapping lugs *n n' o o'*, the lugs *n n'* on cylinder A projecting outwardly, and the lugs *o o'* on the cylinder C projecting inwardly, there being a pair of lugs at each end or near each end of each cylinder.

In order to provide for wear the holes in the lugs from end to end of the cylinder taper to a slight degree, and the rod *r*, connecting said lugs together, has a corresponding taper.

When the wrist-pin turner cannot be passed over the end of the shaft a rod, *r*, is withdrawn from the lugs, the semi-cylinders are opened and clasped over the shaft at any desired position, and then keyed together. The wrist-pin turner is then ready for adjustment on the work.

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

In a wrist-pin turner, the outer cylinder, A, having arranged at intervals interiorly-projecting pins *i*, pinion *e'*, and chuck-bars B, in combination with the inner cylinder, C, having a circle of cogs, *e*, the endless screw *f'*, provided with the sprocket-wheel *h*, the cutter-table D, having a cutter, *g*, and centering-bar P, substantially as set forth.

LAUGHLIN B. GREER.

Witnesses:
R. K. EVANS,
WARREN PARSONS.