

(No Model.)

W. W. SHEARER.
WIRE DRAWING DRUM.

No. 437,135.

Patented Sept. 23, 1890.

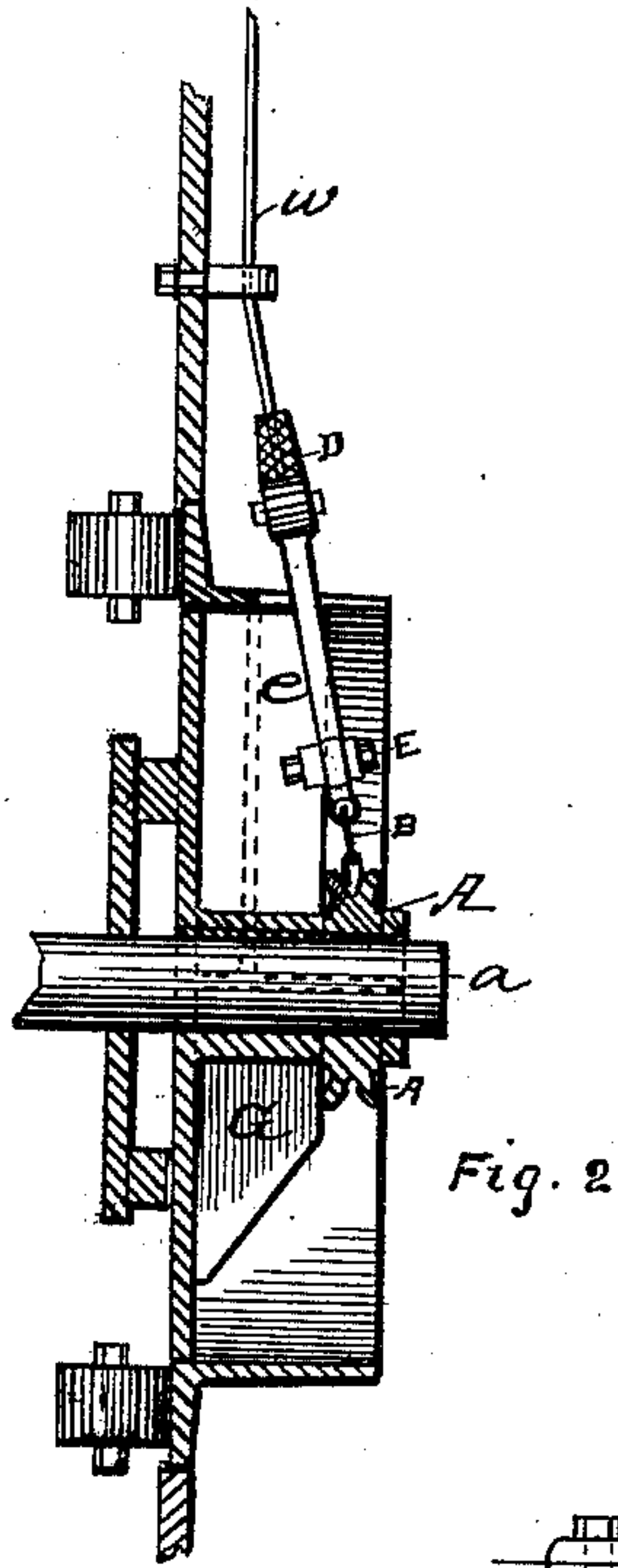


Fig. 2

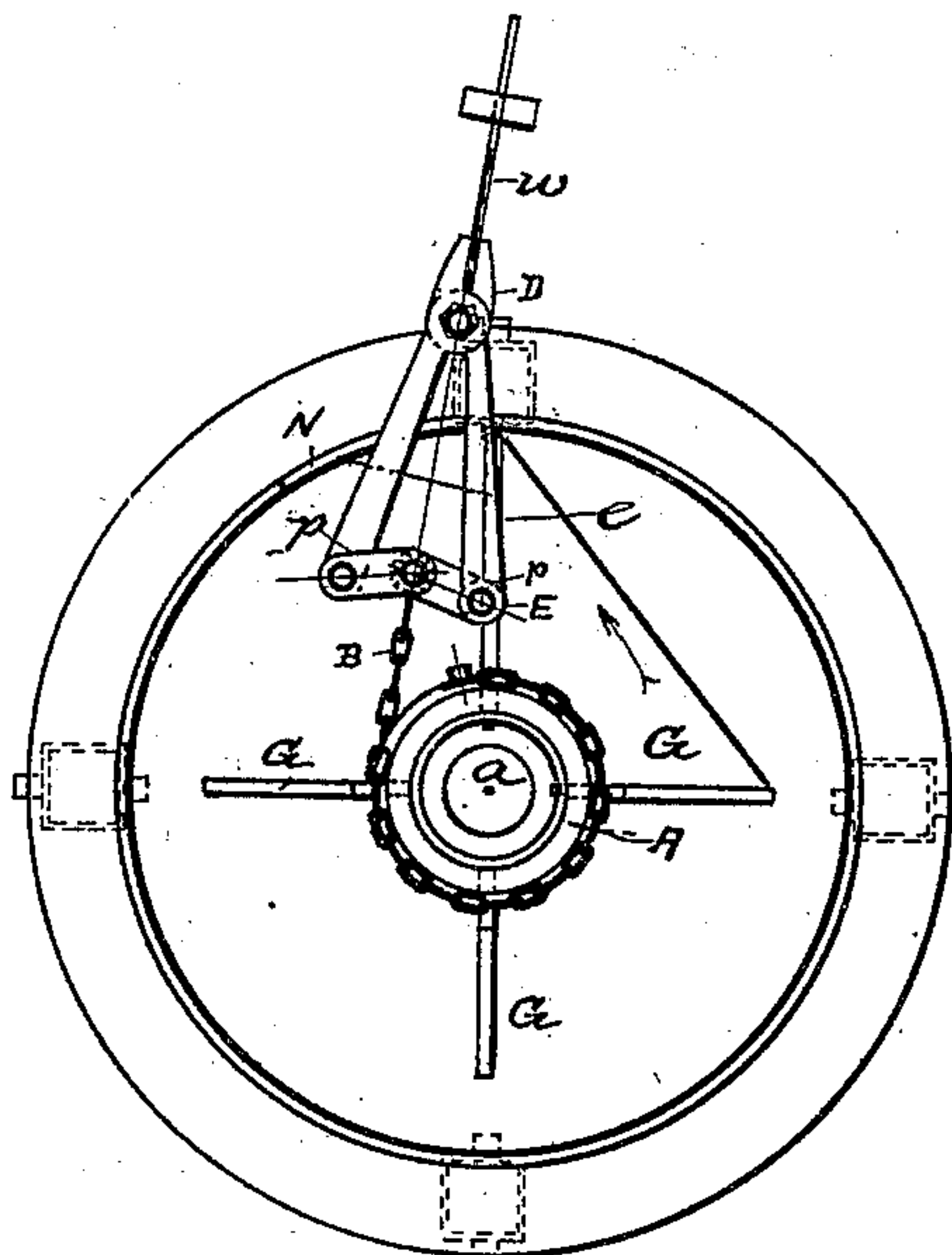


Fig. 1

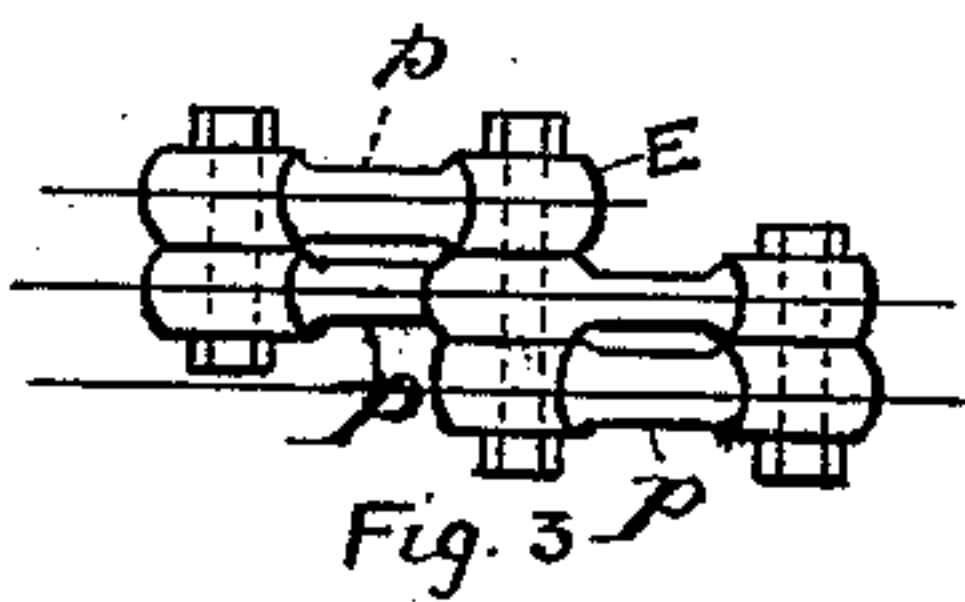


Fig. 3

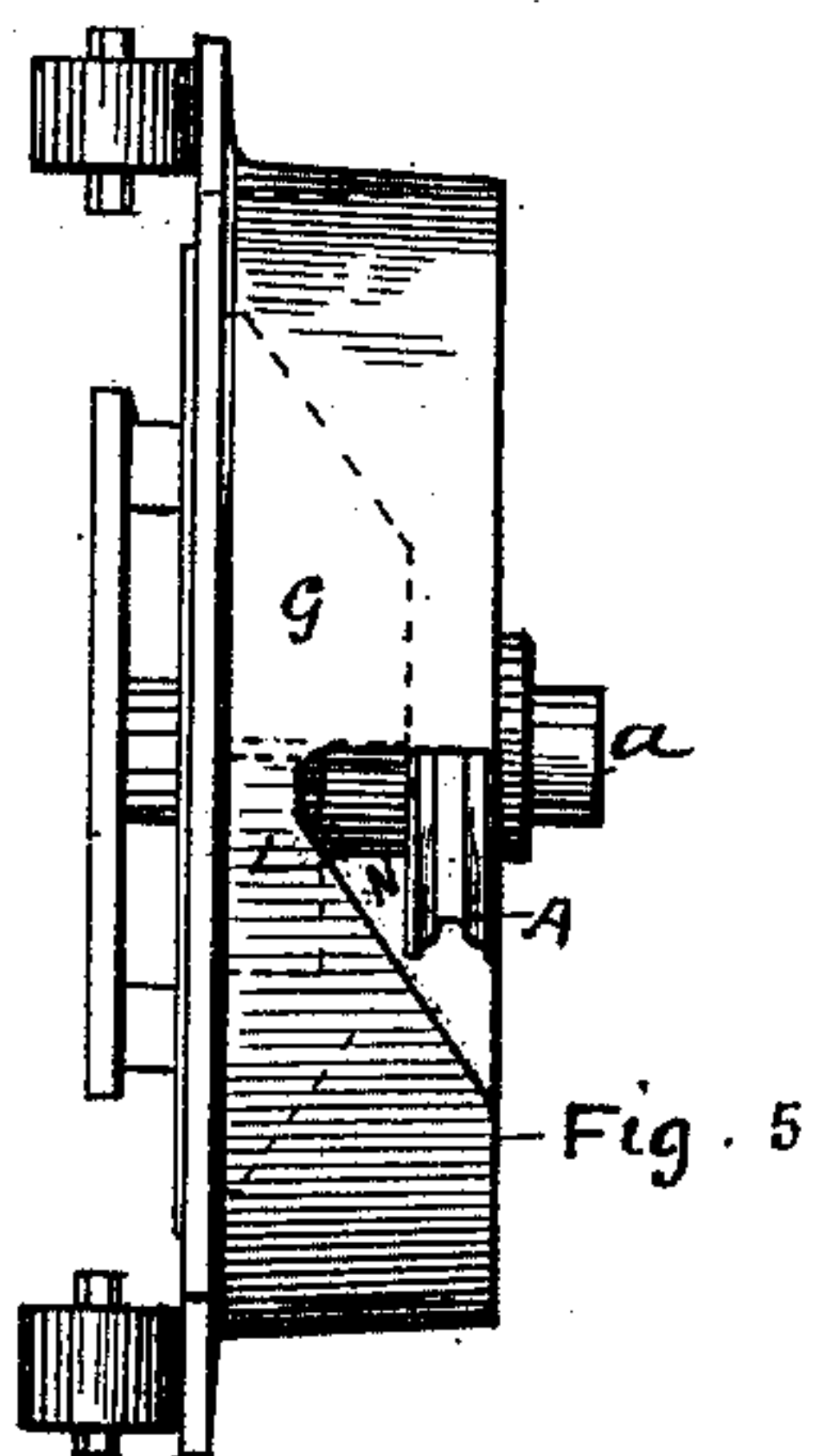


Fig. 5

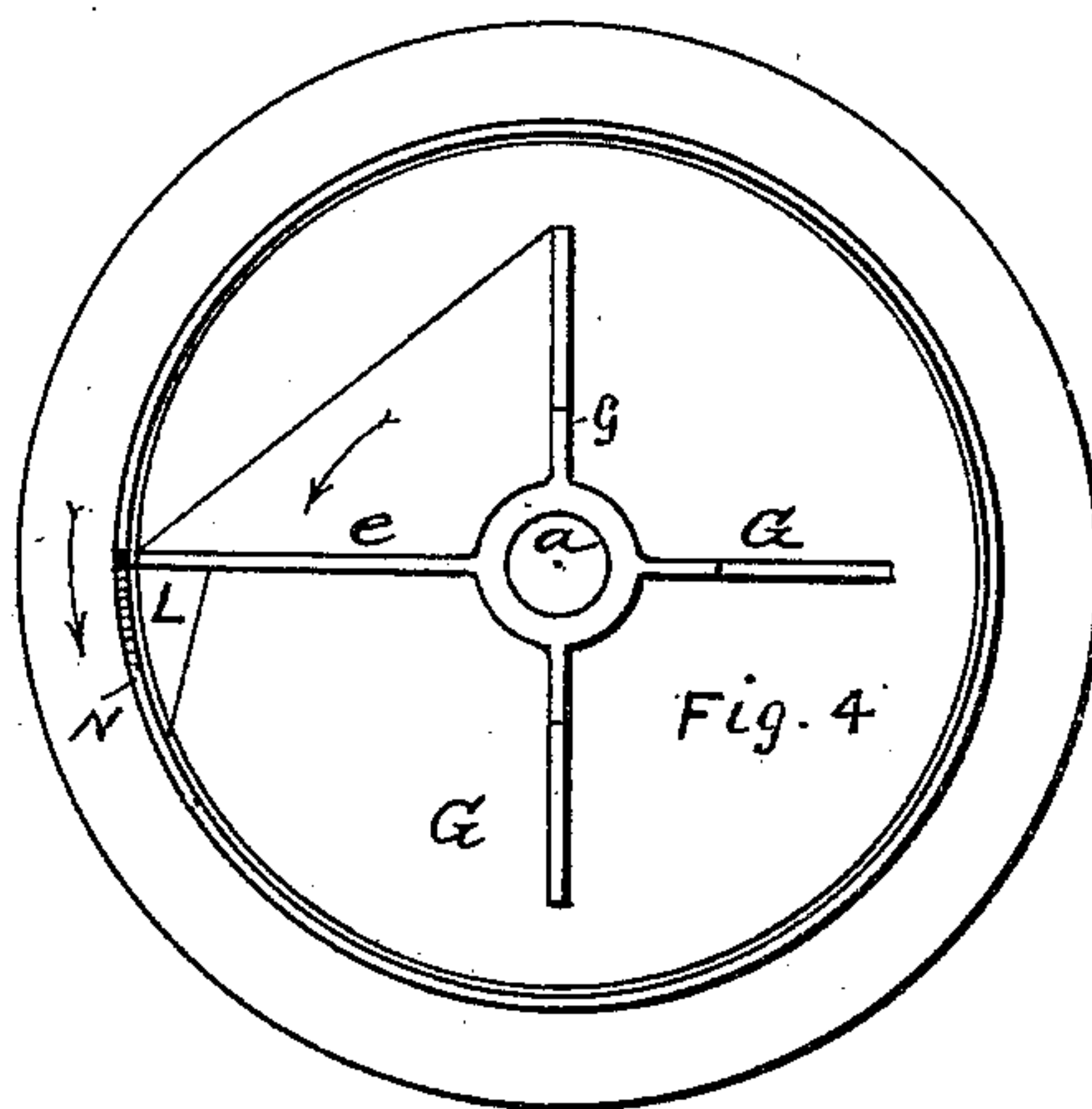


Fig. 4

Witnesses
F. S. Lewis
Warren Dodge

Inventor
William W. Shearer

UNITED STATES PATENT OFFICE.

WILLIAM WATTS SHEARER, OF PORT ANGELES, WASHINGTON.

WIRE-DRAWING DRUM.

SPECIFICATION forming part of Letters Patent No. 437,135, dated September 23, 1890.

Application filed July 9, 1889. Serial No. 317,251. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WATTS SHEARER, of Port Angeles, county of Clallam, State of Washington, have invented certain new and useful Improvements in Wire-Drawing Drums; and I 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 pertains to make and use the same.

My invention relates to wire-drawing "drums," so called, the object being to do away with the draw-bar and pinchers now in use by the substitution of a chain-sheave, chain, and automatic pinchers, the chain-sheave being attached to the shaft or spider on the inside of the drum and revolving with it in such a manner as to draw the wire from the die to the drum by a continuous motion and also to hold the wire during the entire drawing process, thus doing away with all present devices for holding the wire.

A further object is to avoid the waste now occasioned by the frequent application of the pinchers now in use in drawing the wire from the die.

By the present method the wire is taken from the die by means of pinchers attached to a draw-bar operated by means of an eccentric. From two to three motions of the draw-bar and as many applications of the pinchers are required in order to draw enough wire to wrap around the drum and attach to the vise.

By means of my invention the wire is seized at the die by the automatic pinchers attached to a chain or wire rope, which is secured to the sheave within the drum. Power being applied, the chain-sheave revolves independently of the drum and draws the chain and pinchers holding the wire entirely within the drum through an opening in the side thereof. The drum is then set in motion by the long arm of the spider coming in contact with a lug on its inner circumference, thus drawing the wire from the die and attaching it to the drum with one continuous motion.

In the accompanying drawings, Figure 1 is a plan view of the chain-sheave attached to spider, chain, and pinchers drawing wire from the die as applied to the wire-drawing drum invented by W. W. Shearer and patented De-

cember 7, 1886, by Letters Patent No. 353,975. Fig. 2 is a vertical section through drum and spider, showing the working parts under the drum, attachment of chain-sheave to spider, and pinchers in position for taking wire from the die, the pinchers in both drawings being shown at double the scale of the other parts, in order to more plainly exhibit the mechanism of their construction. Fig. 3 shows the knuckle-joint for closing pinchers, with chain attached. Fig. 4 is a plan view of the drum and spider, showing the lug cast on inside of drum, by means of which the drum is set in motion when the chain and pinchers are drawn wholly within the same. Fig. 5 is a side or edge view of the annular drum, showing the portion of its periphery provided with the notch or open slot through which the pinchers draw the end of the wire prior to the drum being set in revolution.

The letter A indicates the sheave or grooved wheel on which the wire-drawing chain B is wound. Said sheave is keyed fast on the same shaft *a* that carries the spider G. The arms of pinchers D (shown enlarged) are connected by toggle-links *p p*, and the chain B is attached to the knuckle or hinge joint E of the latter, as shown in Figs. 1 and 2. The wire *w* being gripped by the pinchers D is drawn with them through its peripheral notch N, Fig. 5. The tractive force required for this operation is applied by the chain B, which winds on sheave A when the latter is rotated along with the shaft *a*. The rotation of the latter also carries with it the spider G, whose longest arm *e* then comes in contact or engagement with a lug L, Fig. 4, formed on the inside of the rim of the wire-drum. The shaft *a*, sheave B, spider G, and the drum continuing to rotate together, the wire is drawn through the die and wound on the drum, as will be readily understood.

What I claim is—

1. The combination, with the wire-drawing drum having a notch in its periphery, of the chain-sheave A, contained within said drum and rotating independently thereof, and the chain attached to the sheave and pinchers, as shown and described.

2. The combination, with the wire-drawing drum having its rim provided with a notch

and lug, as specified, of the chain-sheave A
and spider G, both contained within the drum
and rotating together independently of the
latter, the spider having an arm which en-
gages said lug, and the pinchers and chain at-
5 tached to the sheave, all as shown and de-
scribed.

In testimony whereof I sign this specifica-
tion, in the presence of two witnesses, this
13th day of April, 1889.

WILLIAM WATTS SHEARER.

Witnesses:

HARRY A. COVENTON,
WM. H. SMYTHE.