

D. Zeigler,

Mechanical Movement.

No. 107432.

Patented Sept. 13. 1870.

Fig. 1

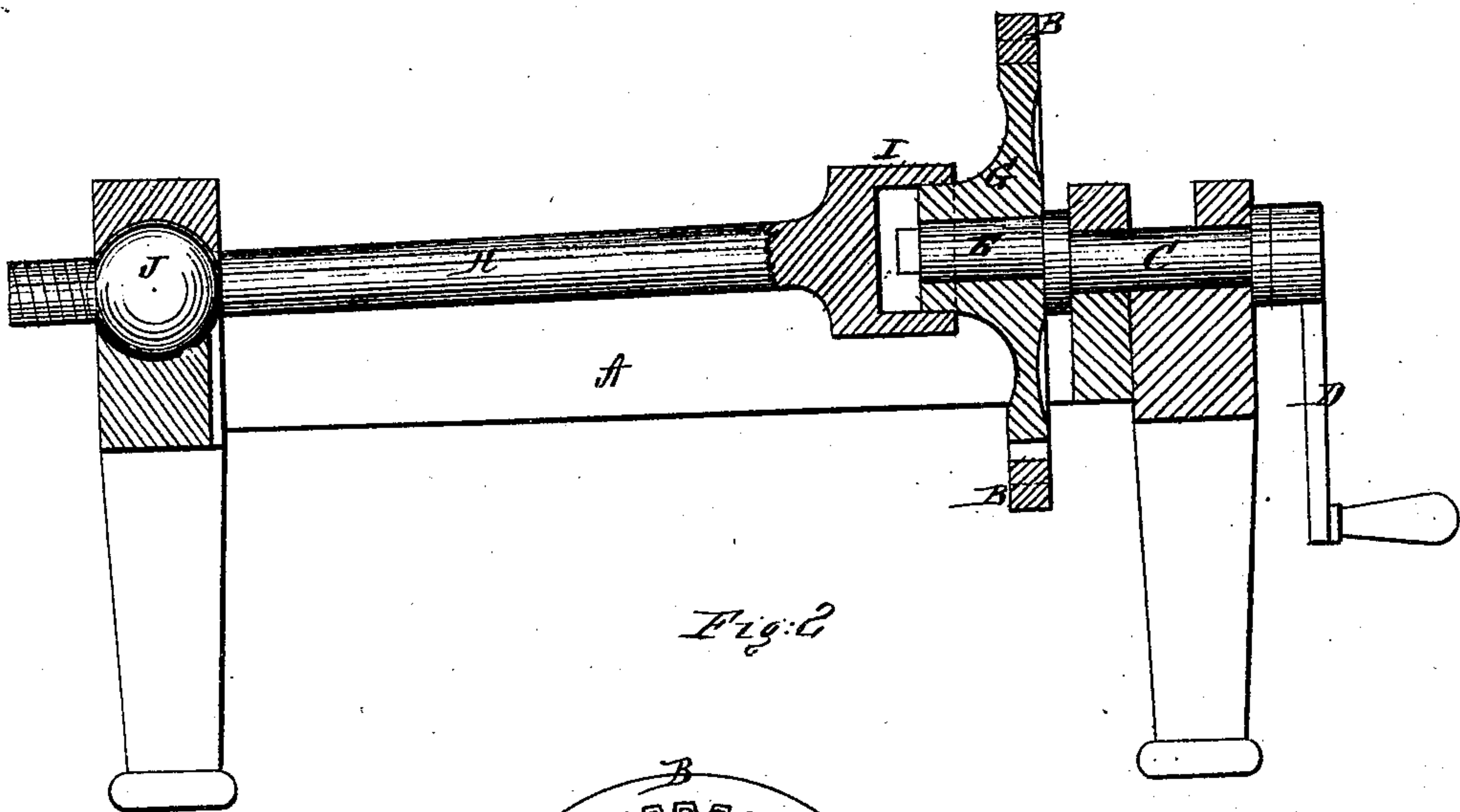
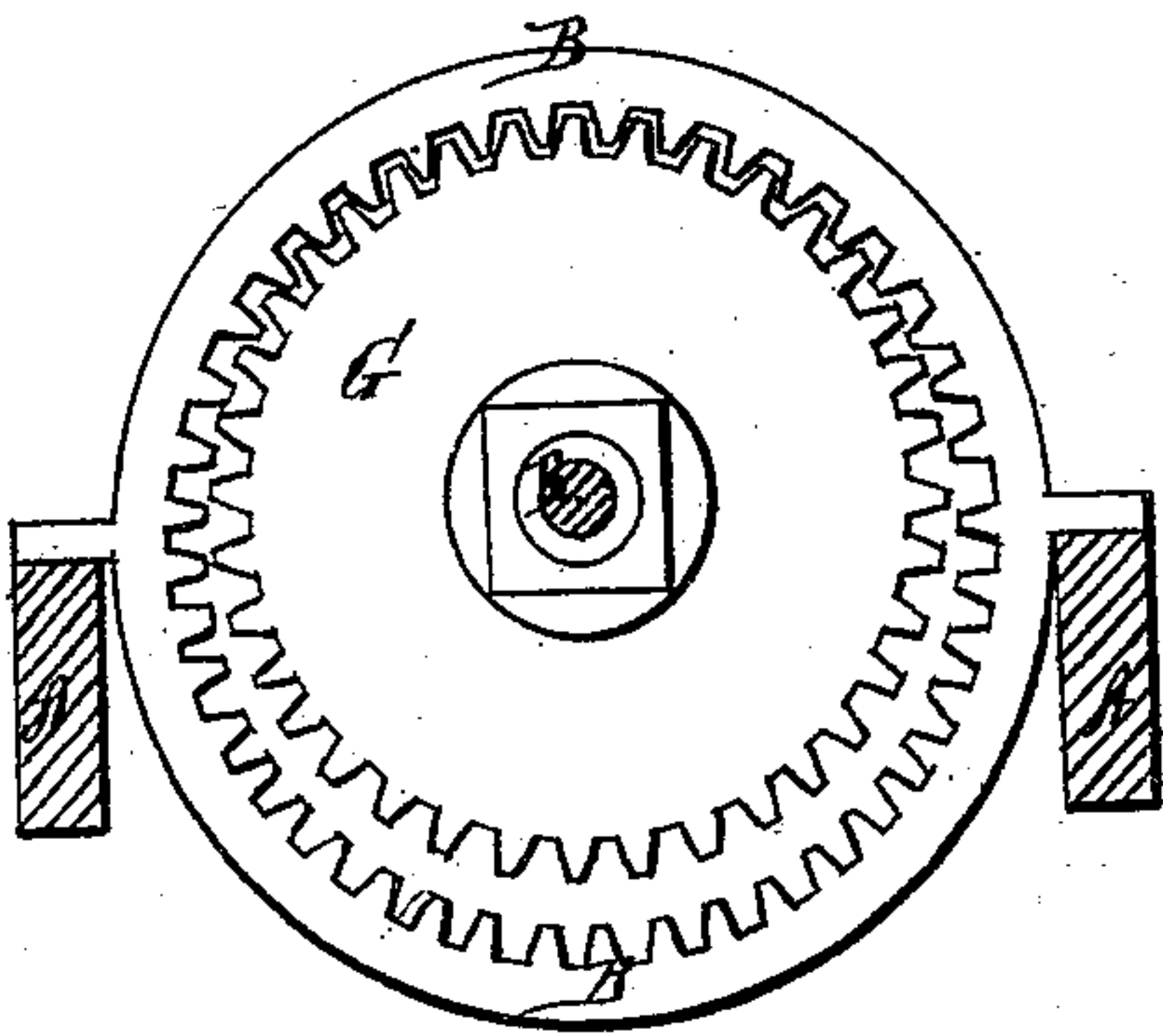


Fig. 2



Witnesses
Ch. L. Evert.
A. A. Freeman

Inventor
Daniel Zeigler.
per *Alexander Mason*
Attys.

United States Patent Office.

DANIEL ZEIGLER, OF LEWISTOWN, PENNSYLVANIA.

Letters Patent No. 107,432, dated September 13, 1870.

IMPROVEMENT IN MECHANICAL MOVEMENT.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DANIEL ZEIGLER, of Lewistown, in the county of Mifflin and in the State of Pennsylvania, have invented certain new and useful Improvements in Mechanical Movement; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a new mechanical movement, whereby a vast increase of power is gained.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section, and

Figure 2, a transverse vertical section of my device.

A represents the frame of my machine, within which is placed, in a vertical position, a wheel, B provided with cogs or teeth around its entire inside circumference.

In suitable journal-boxes on the frame A is placed a shaft, C, provided with a crank, D, on its outer end, and on its inner end it has a cam, eccentric, or crank-pin E.

On the eccentric E is placed a wheel, G, provided with cogs or teeth around its entire outside circumference, the cogs or teeth in this wheel being, however, less in number than those on the wheel B.

The hub of the wheel G is made square and projecting on the inner side, so that a square socket, I, formed upon the end of the shaft H will fit on the same. This shaft is provided with a ball, J, at the point where it has its bearing.

By turning the crank D the wheel G is made to move around the inner circumference of the wheel B, and, the cogs on the former being of a less number than those on the latter, the wheel G will, of course, revolve, revolving the shaft H with it, whereby a vast increase of power is obtained.

If the wheel G has one cog less than the wheel B, then, for every revolution of the eccentric E, the wheel G will be revolved the distance of one cog. If there are two cogs less, the wheel will turn the distance of two cogs for each revolution of the eccentric, and so on until, if the number of cogs should be one-half, then the wheel will make a full revolution for each revolution of the eccentric.

The less difference there is in the number of cogs, the more power is gained.

It will be noticed that, at whatever point the machine may be stopped, the shaft H is perfectly and securely locked; it cannot turn back, it does not matter how much weight is attached to it.

Similar gear-wheels may be added to form connection with a second shaft, or a third, or as many as may be desired, whereby the power may be indefinitely increased, although the speed will be proportionately lessened.

This gearing may be used for an almost endless variety of purposes, in presses of every kind, raising buildings, &c.

To increase speed, the power may be applied to the shaft H, when the shaft C will be made to rotate with proportionately increased velocity, but the power is not so great.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the inner cogged stationary wheel B, the outer cogged wheel G, provided with a square projection on its hub, over which is placed the socket I, on the end of the shaft H, provided with the ball J, all constructed and operated substantially as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 8th day of July, 1870.

DANIEL ZEIGLER.

Witnesses:

A. N. MARR,

A. A. YEATMAN.