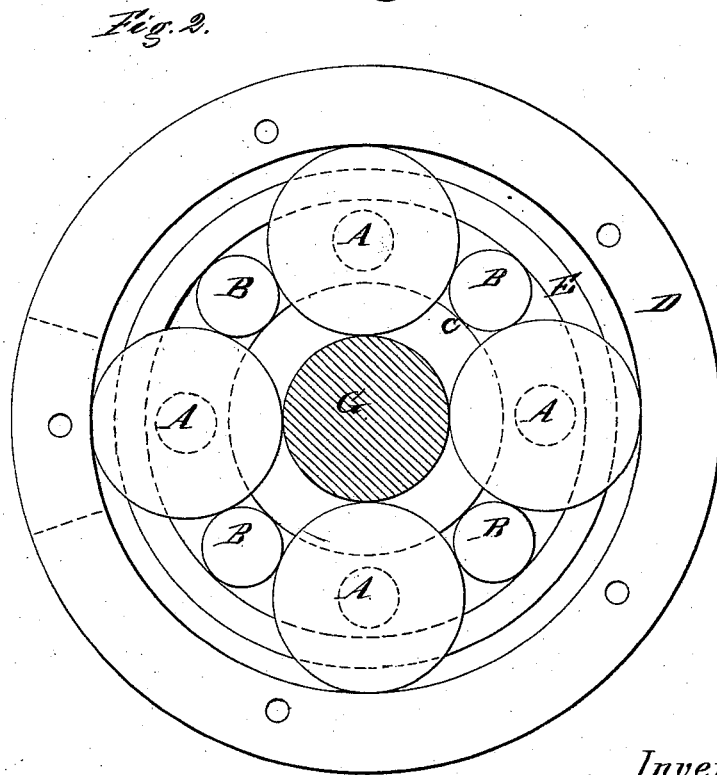
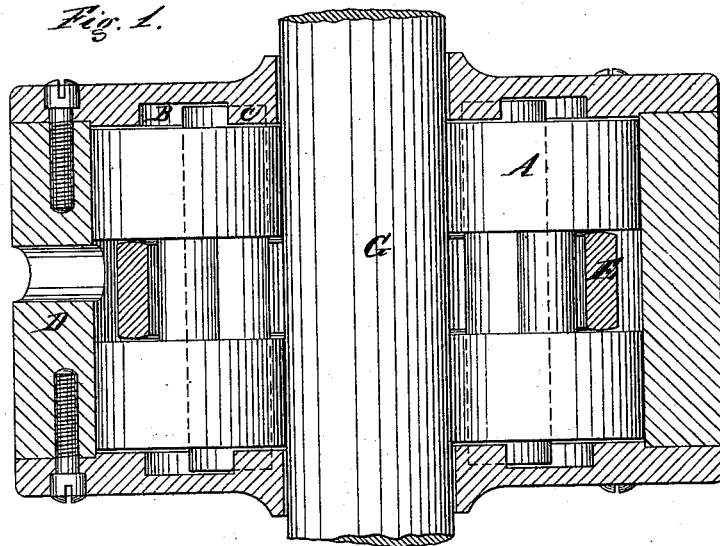


S. HILL.
Anti-Friction Journal Bearing.

No. 208,095.

Patented Sept. 17, 1878.



Witnesses:
L. J. Gordon
John W. Tapley

Inventor:
Oeth Hill

UNITED STATES PATENT OFFICE.

SETH HILL, OF TRUMBULL, CONNECTICUT.

IMPROVEMENT IN ANTI-FRICTION JOURNAL-BEARINGS.

Specification forming part of Letters Patent No. **208,095**, dated September 17, 1878; application filed January 30, 1878.

To all whom it may concern:

Be it known that I, **SETH HILL**, of Trumbull, county of Fairfield, State of Connecticut, have invented a new and useful Improved Journal, which is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a central section of my improved journal; Fig. 2, a plan view thereof, with cover removed.

The object of my invention is to produce a journal which shall rotate with the least possible friction.

I accomplish this by so constructing the journal and its box that the shaft shall not slide in any part upon a fixed and stationary bearing, but shall rotate in contact with a series of rotating bearings, upon which its surface rests only at the slight points of contact made by two round bodies touching each other, whereby friction is so far obviated that the shaft runs without perceptible heating.

I accomplish this by inclosing in a box two series of rolls, one larger, (marked A,) having grooves around their centers, the other rolls (marked B) being a little longer. The small rolls B bear on shoulder C, in the end of the cap-box D, and are retained in position by ring E.

The larger rolls A are first placed within the box, with the ring E surrounding them and resting in their grooves, and the rolls B are then placed between the rolls A, and rest within the inner groove-surface of the cap-box D; and then shaft G is placed in the central space. When the shaft moves they all move, the rolls constituting rotating bearings for the support of the shaft, the ring and the smaller rolls moving in one direction, and the larger rolls in the opposite direction, but all also rotating continuously in the same direction, whereby a compound movement is secured, with the desired result.

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

The combination of the larger grooved rolls and the longer small rolls, of equal diameters throughout, bearing on a shoulder in the end of the cap-box, with the ring and shaft, constructed and operating together in a journal-box, substantially as and for the purpose described.

SETH HILL.

Witnesses:

S. J. GORDEN,
JOHN W. RIPLEY.