

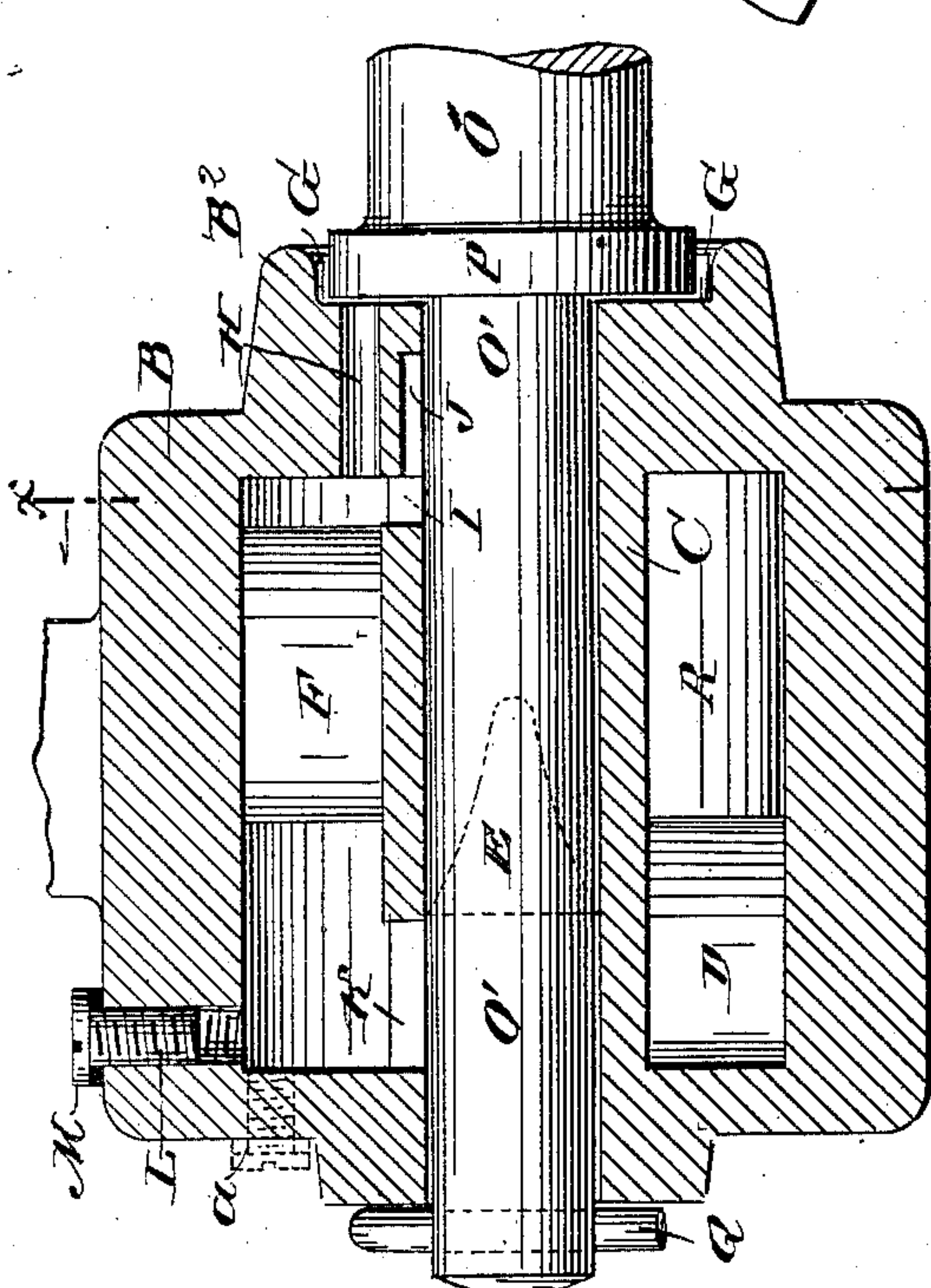
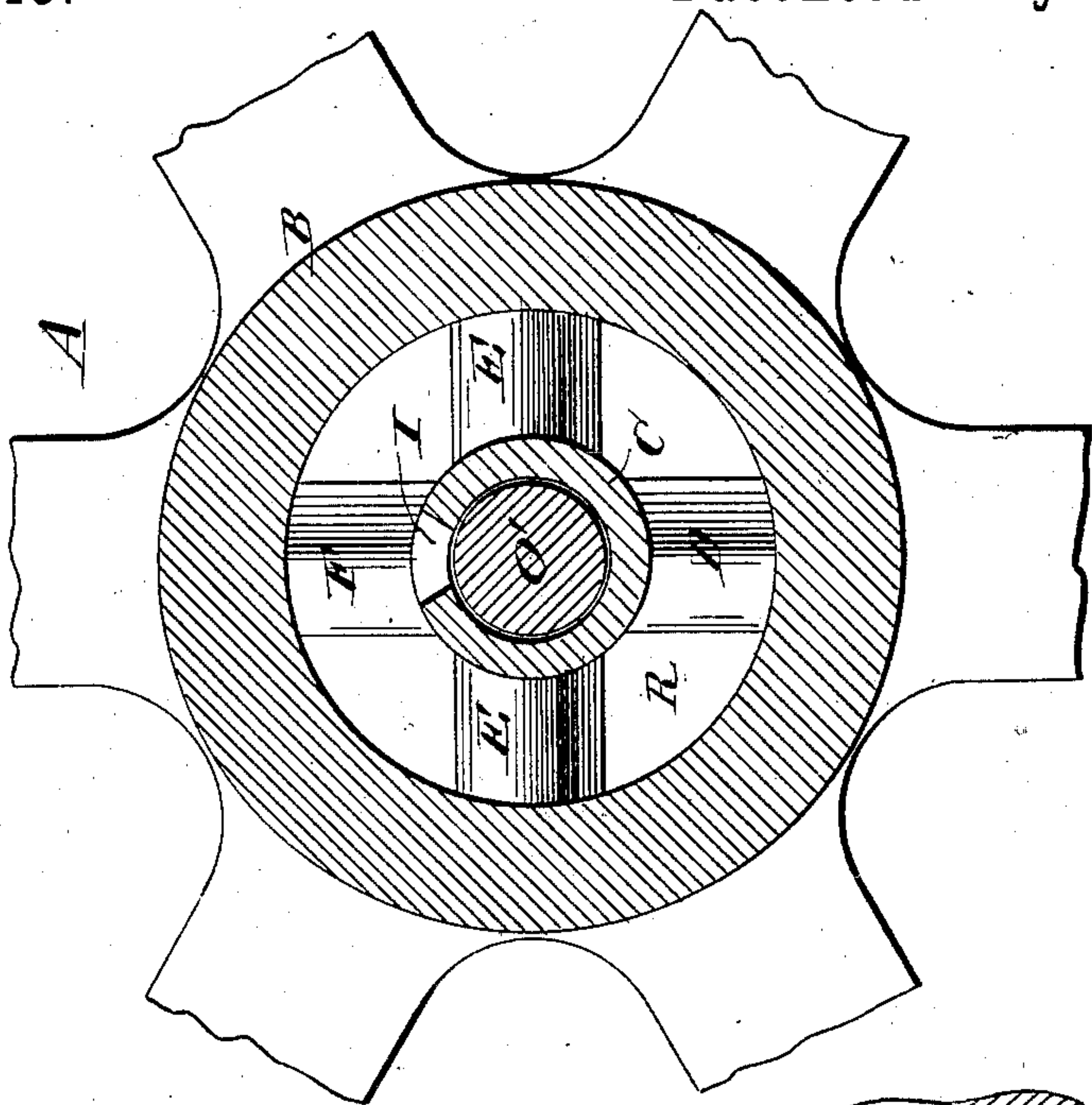
(No Model.)

E. T. THAYER.  
SELF OILING CAR WHEEL.

No. 317,243.

Patented May 5, 1885.

Fig. 3.



WITNESSES:

*E. T. Thayer*  
*C. Sedgwick*

Fig. 1.

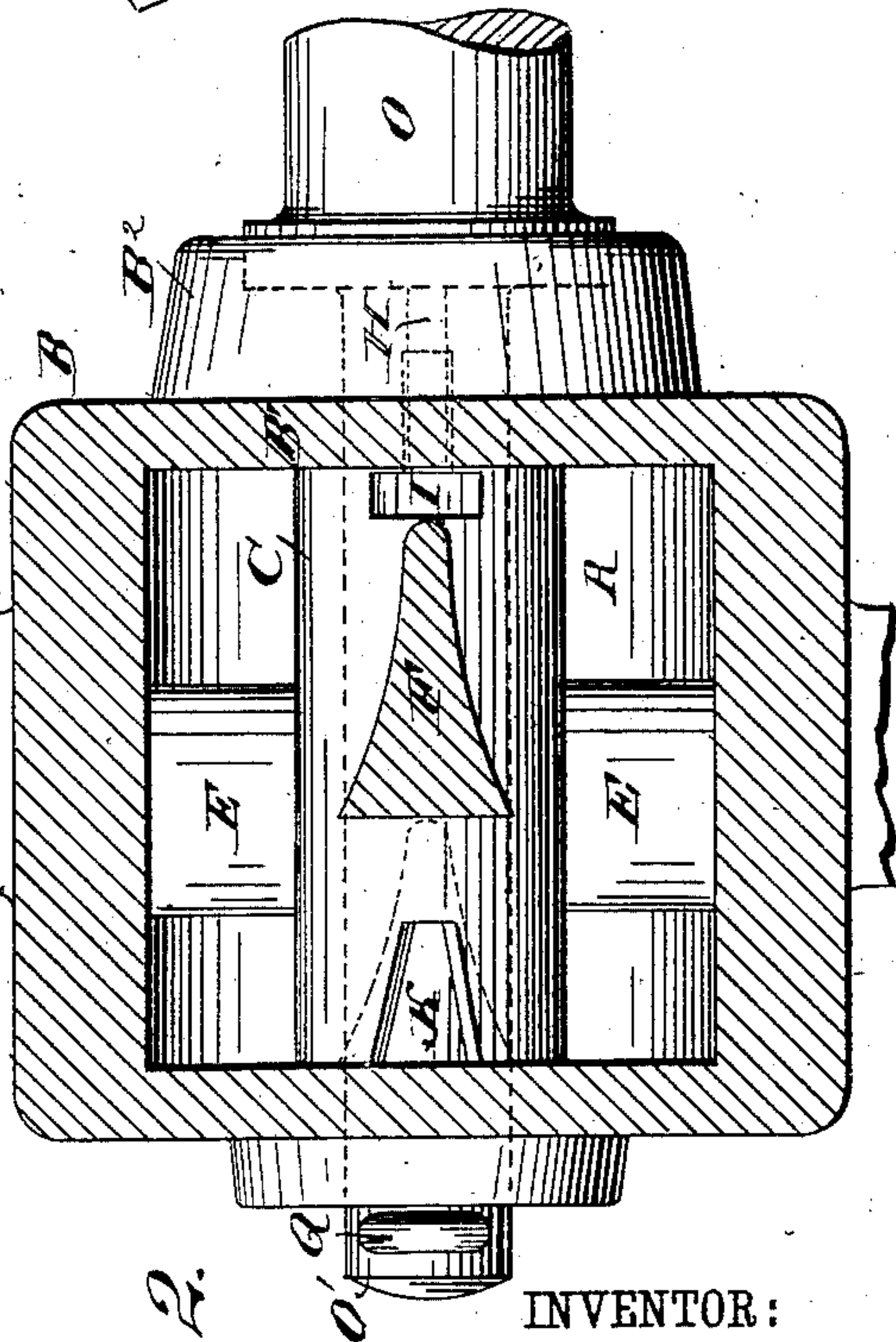


Fig. 2.

INVENTOR:

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# UNITED STATES PATENT OFFICE.

ELLIS TAYLOR THAYER, OF CHARLESTON, WEST VIRGINIA.

## SELF-OILING-CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 317,243, dated May 5, 1885.

Application filed February 17, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, ELLIS TAYLOR THAYER, of Charleston, in the county of Kanawha and State of West Virginia, have invented certain new and useful Improvements in Self-Oiling Hub-Bearings for Cars and other Wheel-Vehicles, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of a hollow-hub car-wheel bearing embodying my improvement. Fig. 2 is a horizontal sectional plan view of the same, and Fig. 3 is a sectional end elevation on the line *xx* of Fig. 1.

The object of this invention is to improve the construction of self-lubricating hub-bearings and provide the same with means for agitating and economically distributing the lubricant to the bearing and journal.

The invention consists in a hollow hub formed with an inner bearing-sleeve, which parts are connected and supported by a series of blades.

The invention further consists in parts and details of construction, as will hereinafter be more fully described and claimed.

In the drawings part of the car-wheel A is shown broken away. The hub B is cast hollow, with an inner bearing-sleeve, C, integral with the hub, the shell of the hub B and the bearing-sleeve C being connected and sustained by a series of blades, D E F, tapering about equally, or slightly curving from point to heel, and ranging parallel with the length of sleeve C, arranged equidistant or quartering. The blade D is formed at the outer end of the hub. The blades E E are arranged opposite each other at about the center, a little nearer the outer end. The blade F is somewhat longer than those previously described, or may be of the same length, and is arranged a short distance from the inner face of the inner end, thereby leaving a space between the end of blade F and the inner face of the hub.

On the hub B, at the inner end, a collar, B<sup>2</sup>, is formed, having a recess, G, from which re-

cess one or more apertures, H, extend to the oil-chamber R, or space between the hub and sleeve.

One or more apertures, I, are formed in the sleeve C in front of the blade F.

In the bearing of sleeve C, in the inner face thereof, a short distance from the inner end, are formed one or more grooves, J, which connect with the aperture I, and conduct the oil from chamber R to the journal.

At the outer end of sleeve C, near the heel of blade F, one or more apertures, K, are formed in the sleeve.

On the outer end of the hub B a screw-threaded aperture, L, is formed, in which a plug, M, is placed.

The hub and sleeve C revolve on journal O' of the axle, which projects beyond the hub and receives a key, Q, to retain the wheel on the journal. The axle O has the usual collar, P, which collar takes in the recess G formed in the collar B<sup>2</sup>.

The tapering ends of the blades D E F all range one way, or alike, parallel to the length of the bearing-sleeve C, arranged as shown and described. The blades support and strengthen the sleeve C and hub B.

The blades may be arranged in stepped, spiral, or other form.

In operation, the hub B is filled with the lubricant through the aperture L, which is then closed by the plug M. When the wheel revolves, the lubricant retained in the hub is propelled forward by blade D, and impinges on the oppositely-arranged blades E E and blade F, by means of which the lubricant is continuously agitated, and caused to exude or flow slowly out of the apertures K I and groove J in the bearing-sleeve C and through the aperture H in recess G of the collar B<sup>2</sup>, whereby the lubricant is evenly and regularly fed and distributed on the journal O' and collar P of the axle.

In case the oil or lubricant becomes chilled or congealed, or heavy oil is used, the blades have a tendency to liven up the lubricant by a continuous agitation thereof.

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

1. A car-wheel having a hollow hub re-

cessed and an inner apertured bearing-sleeve connected therewith by a series of longitudinal wedge-shaped blades, substantially as described.

- 5 2. The combination, with the car-wheel A, of the apertured and recessed hub B, the apertured and grooved sleeve C, and the blades

E E, F, and D, substantially as shown and described.

ELLIS TAYLOR THAYER.

Witnesses:

JOHN B. DAVENPORT,  
C. N. CRAWFORD.