

(No Model.)

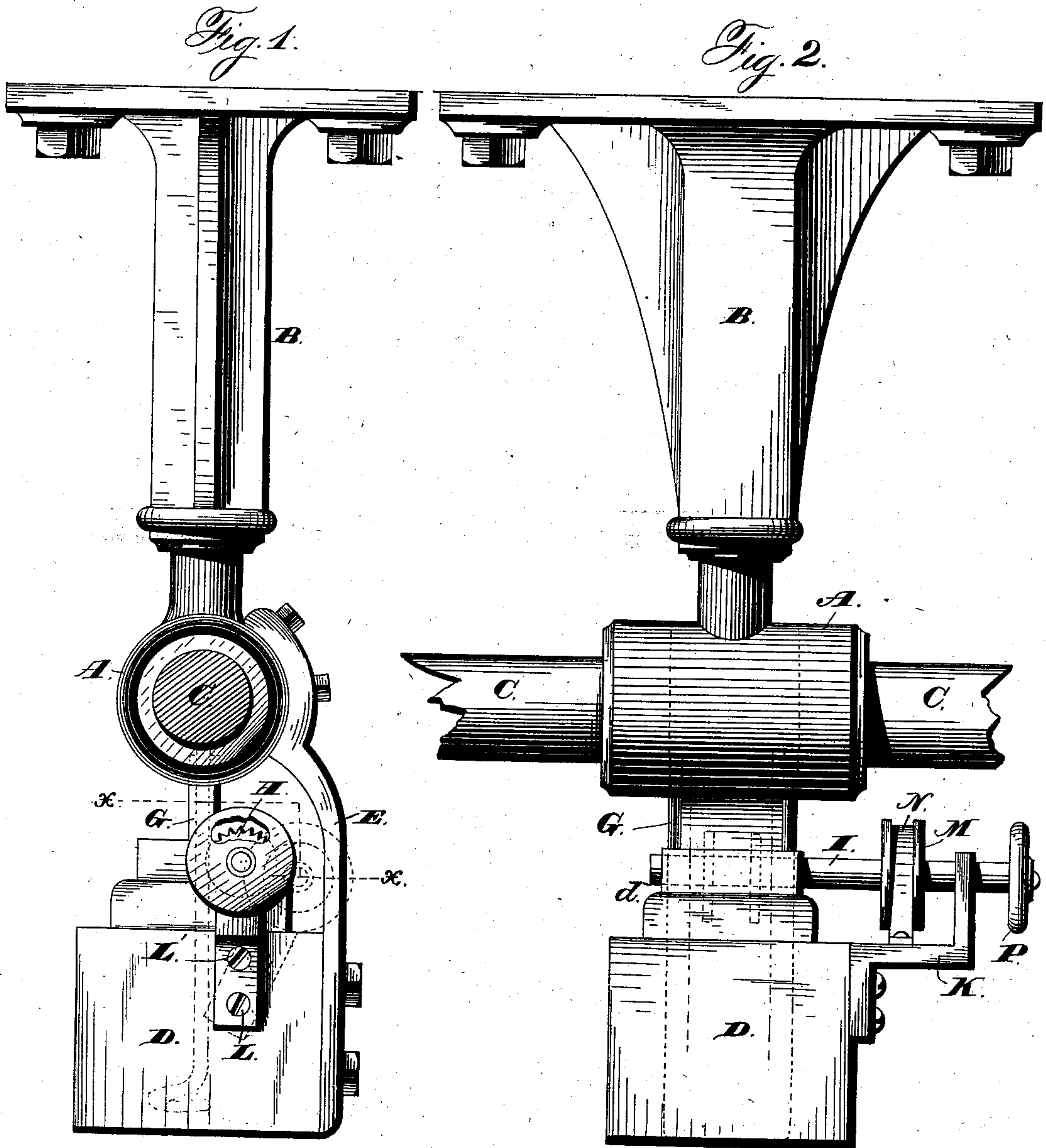
2 Sheets—Sheet 1.

J. BRINKERHOFF.

LUBRICATING MECHANISM FOR JOURNALS, HANGERS, AXLES, &c.

No. 259,085.

Patented June 6, 1882.



Witnesses.
Jas. E. Hutchinson.
J. A. Rutherford

Inventor.
Jacob Brinkerhoff,
by his Attorney,
James L. Norris.

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Fig. 3.

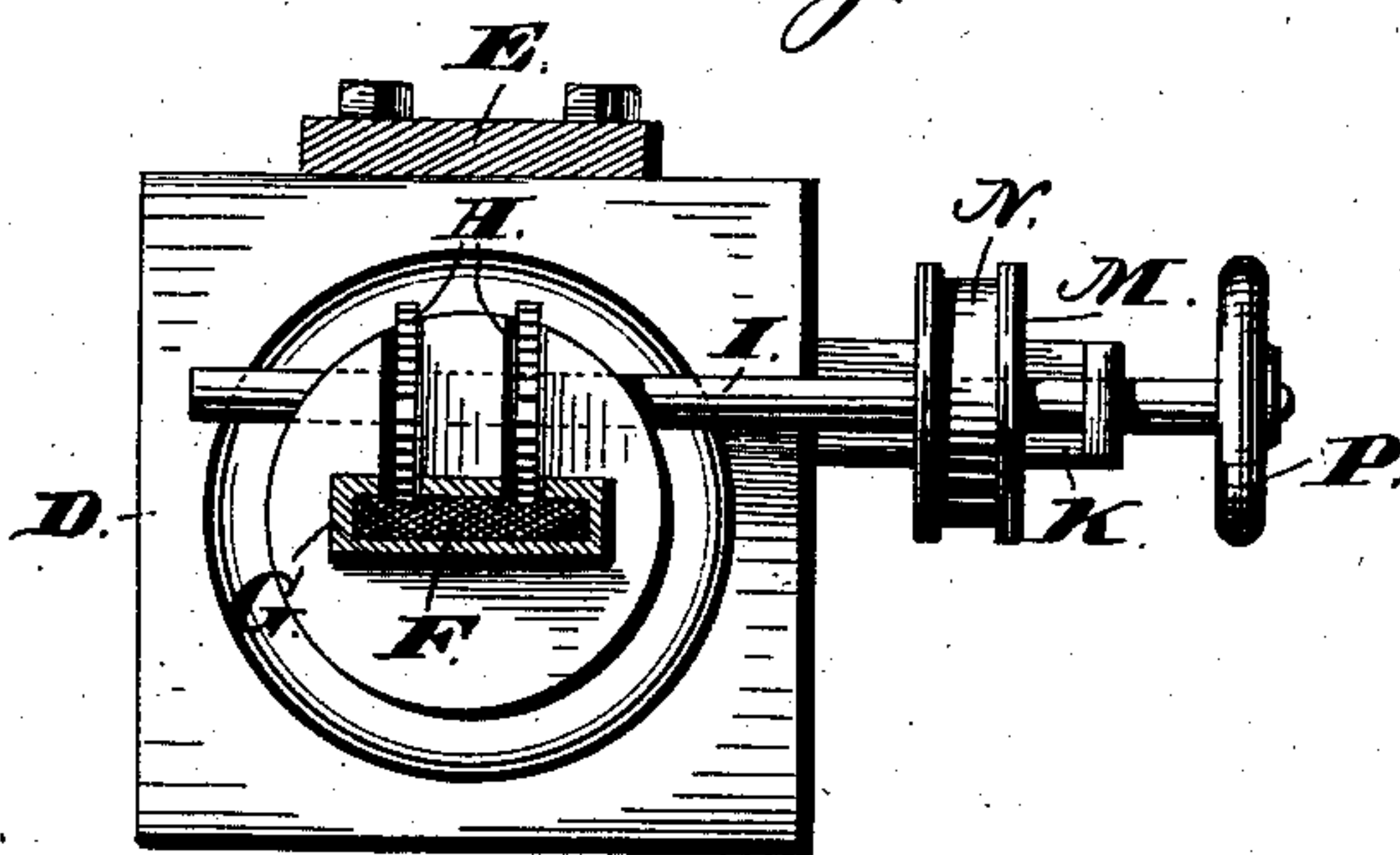
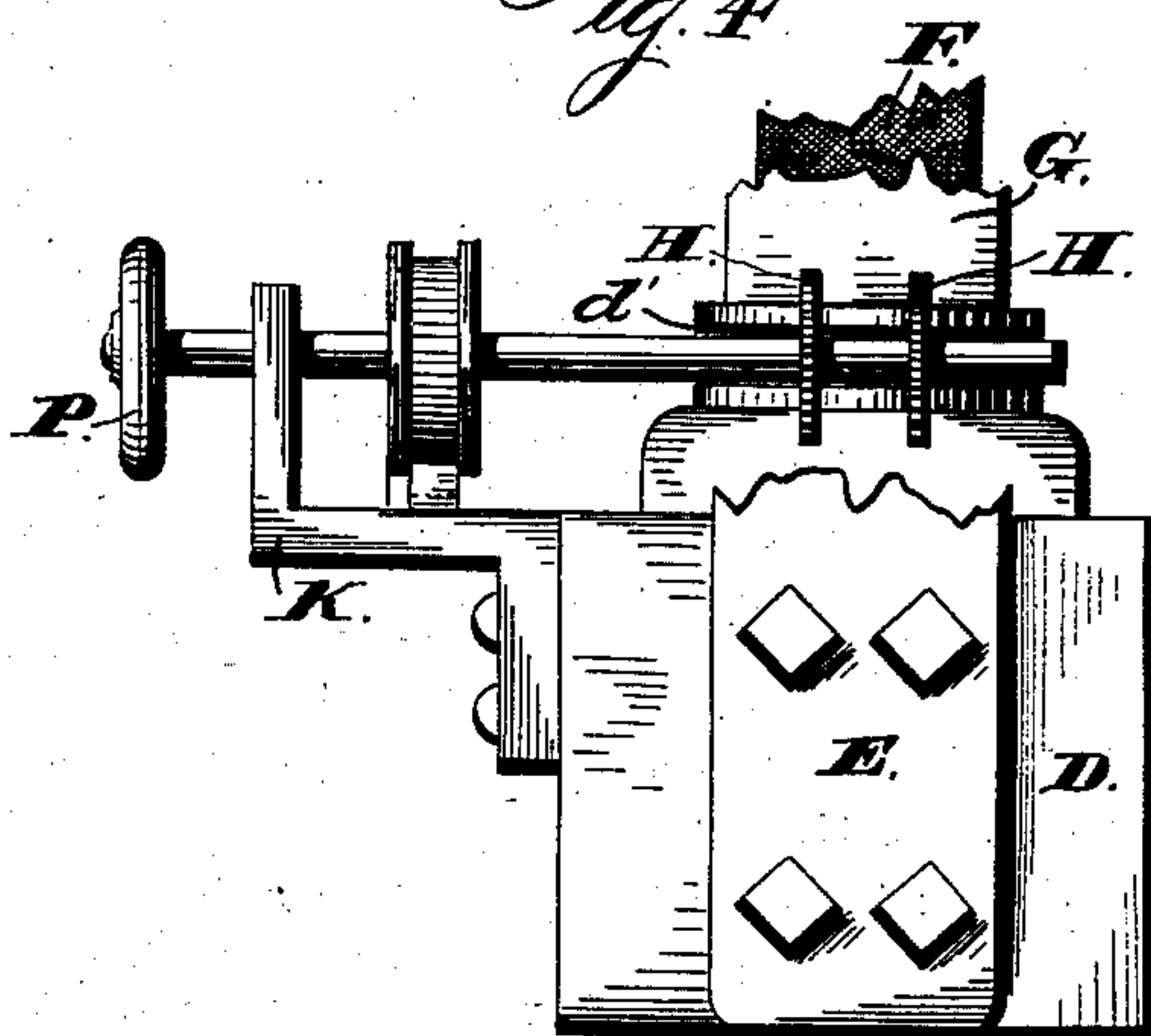


Fig. 4.



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UNITED STATES PATENT OFFICE.

JACOB BRINKERHOFF, OF AUBURN, NEW YORK.

LUBRICATING MECHANISM FOR JOURNALS, HANGERS, AXLES, &c.

SPECIFICATION forming part of Letters Patent No. 259,085, dated June 6, 1882.

Application filed May 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JACOB BRINKERHOFF, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented new and useful Improvements in Lubricating Mechanism for Journals, Hangers, Axles, &c., of which the following is a specification.

This invention relates to that class of lubricators for shafting in which the lubricant is supplied to the shaft from an oil-cup by a wick and means employed for automatically feeding the wick forward as the latter becomes worn by reason of its frictional contact with the shaft.

The objects of my invention are to provide a novel, strong, and effective spring feed mechanism for feeding the wick forward with certainty and regularity; also, to so adapt the said mechanism that in replacing the worn-out wick by a new one the mechanism can be readily and conveniently operated for storing up power. These objects I attain by employing, in connection with the shaft to be lubricated, a small shaft or spindle carrying one or more spur-wheels which engage with the wick to be fed forward, this shaft or spindle which carries the spur wheel or wheels being operated by a coiled spring which is applied to it, or to a suitable drum thereon, in such manner that after the spring has been wound up and the several parts of the lubricator are in proper position the spring will gradually uncoil and rotate the shaft or spindle carrying the spur-wheels as the wick wears away, thereby positively and effectively feeding the wick forward.

In the accompanying drawings, which illustrate my invention employed in connection with that class of boxes which are suspended by a hanger from above, Figure 1 represents a side elevation of the lubricator and hanger with the shaft in cross-section. Fig. 2 is a side elevation. Fig. 3 is a sectional plan taken on the line *x x*, Fig. 1. Fig. 4 represents a rear view of the lubricating apparatus.

In the present instance I have illustrated the box A, in which the shaft has its bearing, as belonging to a vertical or suspended hanger, B, for shafting, the hanger being designed to be secured to a beam or joist across a ceiling; but as my invention relates to a lubricator for

shafting, axles, &c., in general, the form, location, or in fact the use at all of the hanger is immaterial, the only prerequisite being some sort of a box or bearing for the shaft C or axle to be lubricated.

The oil-box D, which is of any appropriate configuration, is suspended from the bearing-box for the shaft by means of a supporting-plate, E, that is bolted both to the bearing-box and to the oil box or receptacle.

The wick F, for conducting lubricant from the oil-box to the shaft, passes through a wick-tube, G, which has a sectional area proportionate to the size of wick employed, and which connects the cap or dome *d* upon the oil-box in which the shaft has its bearing. The devices for feeding the wick forward to the shaft consist of one or more spur-wheels, H, mounted upon a short shaft or spindle, I, and arranged to engage the wick, so that by turning the short shaft or spindle the spur-wheels will feed the wick outward through the wick-tube. The spindle carrying these spur-wheels is mounted in a suitable bracket, K, that is secured to the oil-box in such manner that it can be adjusted in order to free the spur-wheels from the wick, and thus admit of the latter being drawn out from the wick-tube after the wick has become too short for use, or to vary the depth of engagement of the teeth of the spur-wheels in the wick, or so that the spring can be wound up while the wick is in the tube without moving the wick. To such end this bracket is pivoted to one side of the oil-box by means of a pivot, L, and secured in a fixed position upon the oil-box by means of a set-screw, L', which may either pass through a slot in the bracket or simply pass through a perforation in the bracket and bear against the oil-box. I do not, however, confine myself to any particular method of adjustment of this spindle. The method of adjustment may be varied as may be most convenient to accomplish the purposes, although that herein shown is simple and convenient.

The spur-wheels extend through slots in the wick-tube and cap upon the oil-cup, so as to come into engagement with the wick, and as illustrated in Fig. 4. The spindle upon which these spur-wheels or propelling devices are mounted passes through a horizontal recess,

d' , which is formed in the neck of the cap d upon the oil-cup, thus allowing the spindle to be moved laterally from the neck when the bracket K is swung upon its pivot.

5 In order to impart to the spur-wheels a constant tendency to rotate in a direction to feed the wick toward the shaft, so that the wick shall be fed forward as it wears away, I fix a small double-flanged drum, M, upon the spindle I, and arrange upon said drum a suitable watch-spring, N, one end of which is secured to the drum and the other end to the bracket or other suitable fixture. Any other suitable form or kind of spring may be used. The spindle is provided with a button, P, for convenience in turning it so as to wind up this spring.

10 The spring being wound up and the wick adjusted in the wick-tube, it is evident that the power thus stored up will expend itself in proportion to the wear of the wick, and that it will keep the latter at all times well up against the shaft.

It will be obvious that various modifications of this apparatus could be made without departing from the spirit of my invention—as, for example, other means than the plate E can be employed for maintaining the oil-receptacle in proper position relative to the box or bearing for the shaft or axle—such, for instance, as a seat or bracket appropriately located. Again, the wick-tube, instead of being connected with the upper portion of the oil-receptacle, can be connected with the side thereof, and can be arranged in either a vertical, horizontal, or an inclined position.

35 I have illustrated spur-wheels upon the spindle for feeding forward the wick; but it will be seen that other analogous propelling devices could be fixed upon the spindle for the same purpose—as, for example, a series of radial spokes or pins adapted to engage the wick.

The form of spring is not essential so long

as it acts to rotate the spindle; and hence the spring can be arranged to act either directly upon the spindle or indirectly thereon through some intervening mechanism, such as gearing or the like. 45

The mode of adjusting the spindle can also be varied—as, for instance, the bracket K could be fixed and provided with an adjustable bearing for the spindle, or any other suitable devices can be employed for effecting such adjustment of the spindle. 50

What I claim is—

1. The combination, in a lubricator for shafting, axles, &c., of a wick-tube connected to an oil-receptacle, a spindle provided with one or more spur-wheels or other propelling devices for feeding forward the wick, and a spring for actuating the spindle so as to cause the wick to be fed forward as it wears away. 55 60

2. The combination, in a lubricator for shafting, of a spindle provided with one or more spur-wheels or analogous devices for feeding forward the wick from the oil-receptacle to the shaft, and the pivoted bracket K, providing a bearing for the spindle and rendered adjustable, substantially as described. 65 70

3. The combination, with the bearing-box for a shaft, of the oil-receptacle suspended from said bearing-box, the wick-tube intermediate of the two, the spindle I, provided with one or more spur-wheels or other suitable propelling devices, the drum M, and the spring N, constructed and arranged substantially as described. 75

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JACOB BRINKERHOFF.

Witnesses:

JOSEPH C. ANDERSON,
JAMES T. CARSON.