

(No Model.)

G. K. WATERHOUSE.
OILER FOR CAR AXLE BOXES.

No. 291,247.

Patented Jan. 1, 1884.

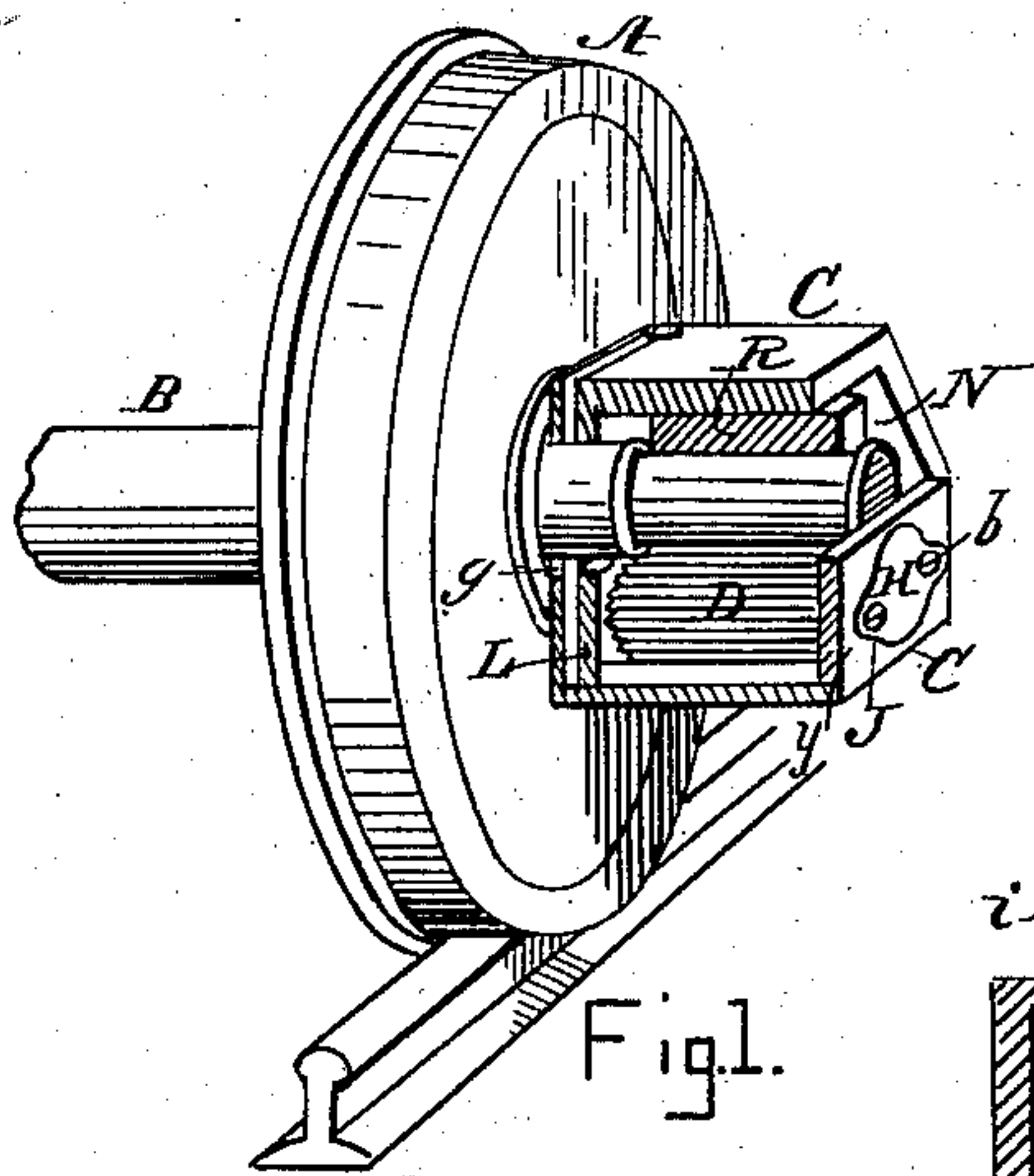


Fig. 1.

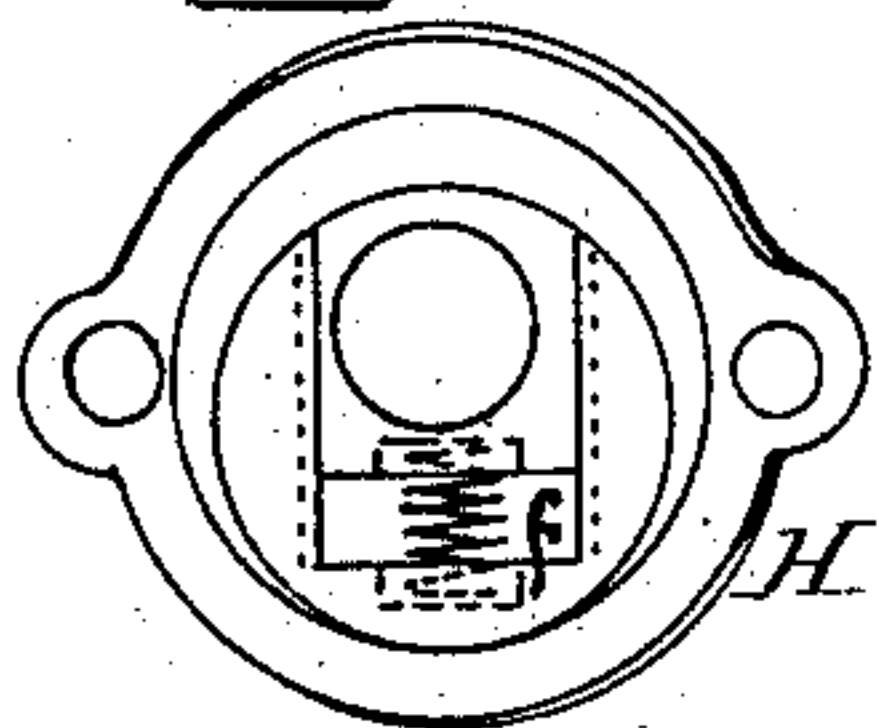


Fig. 3.

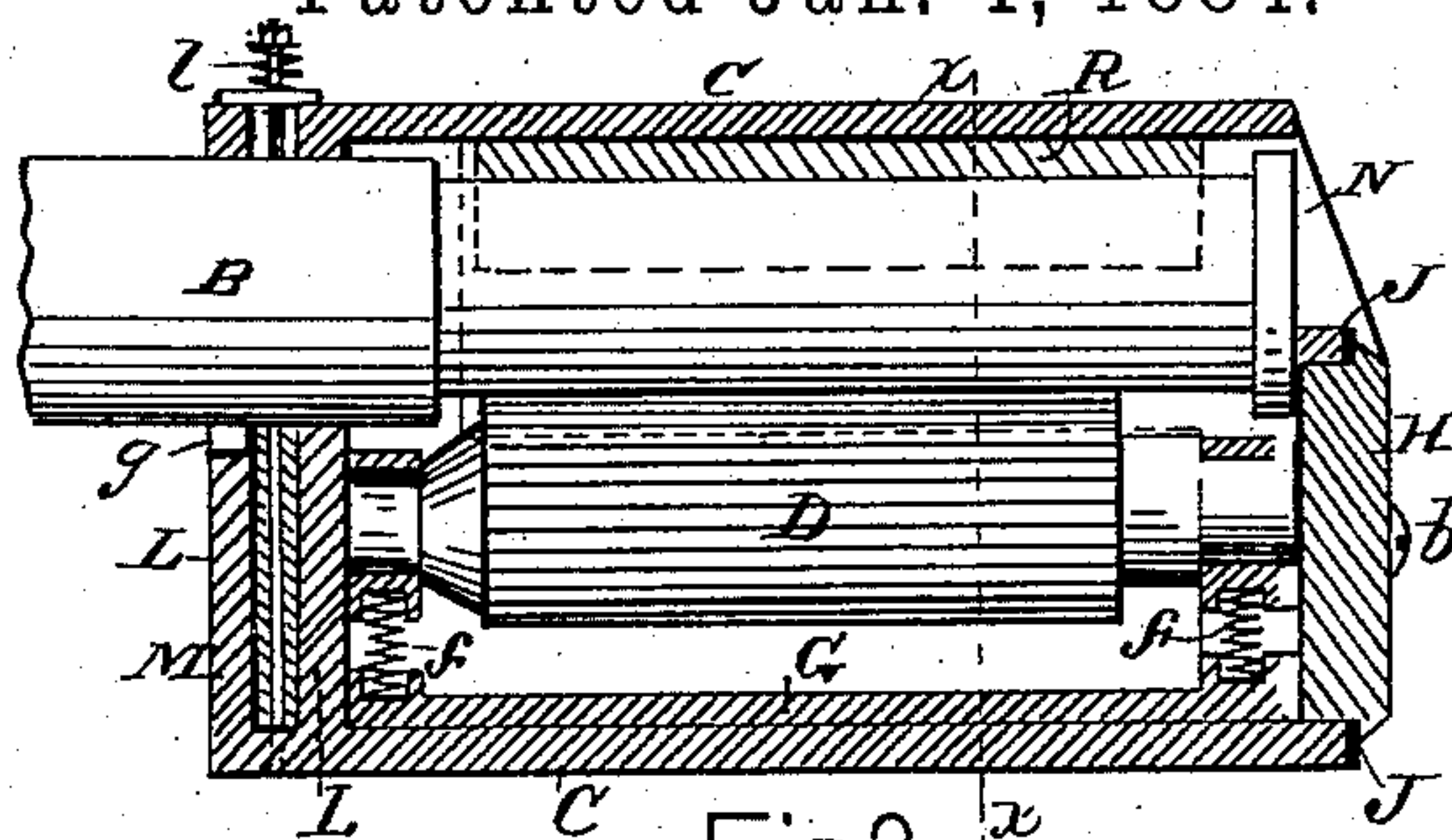


Fig. 2.

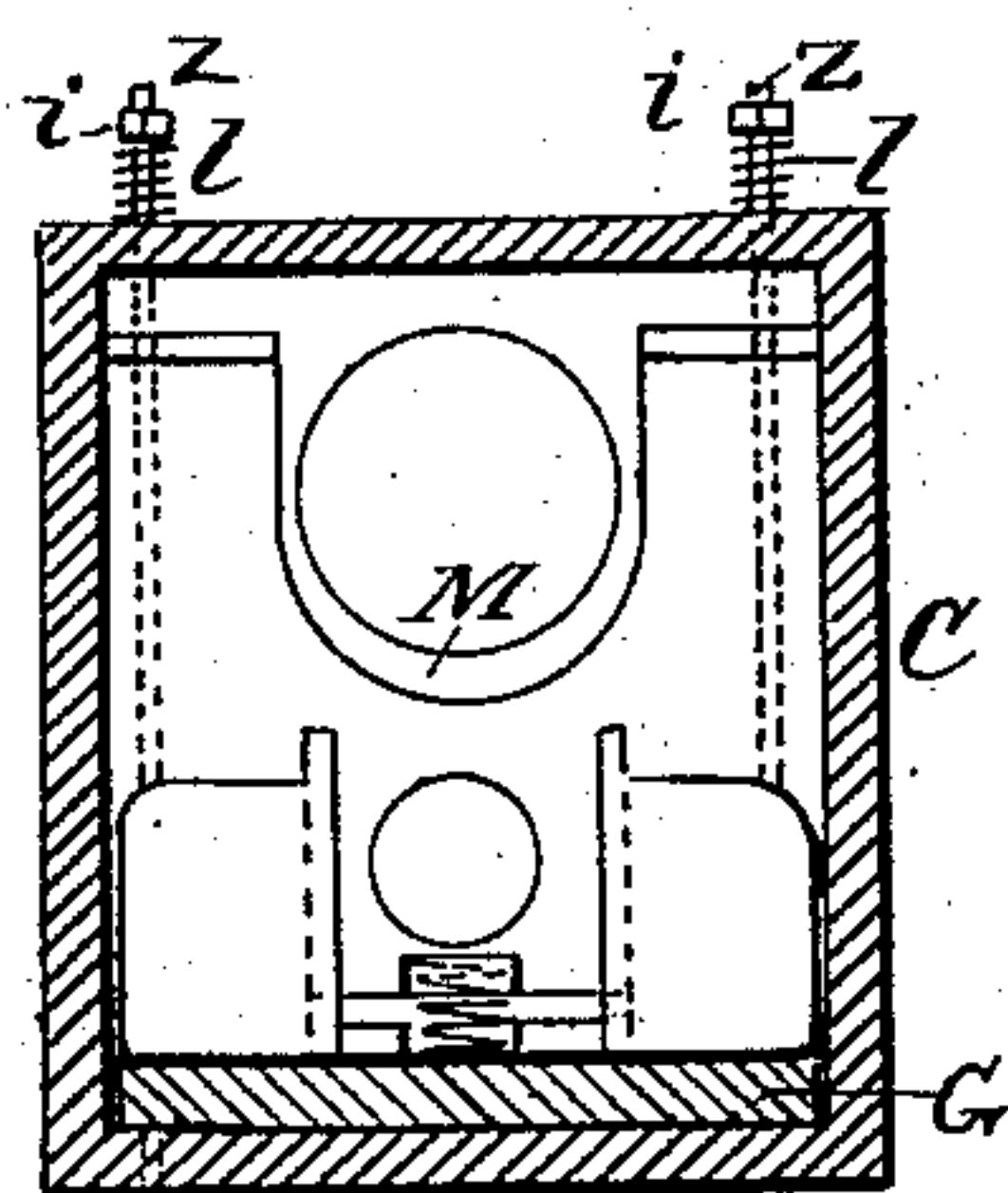


Fig. 4.

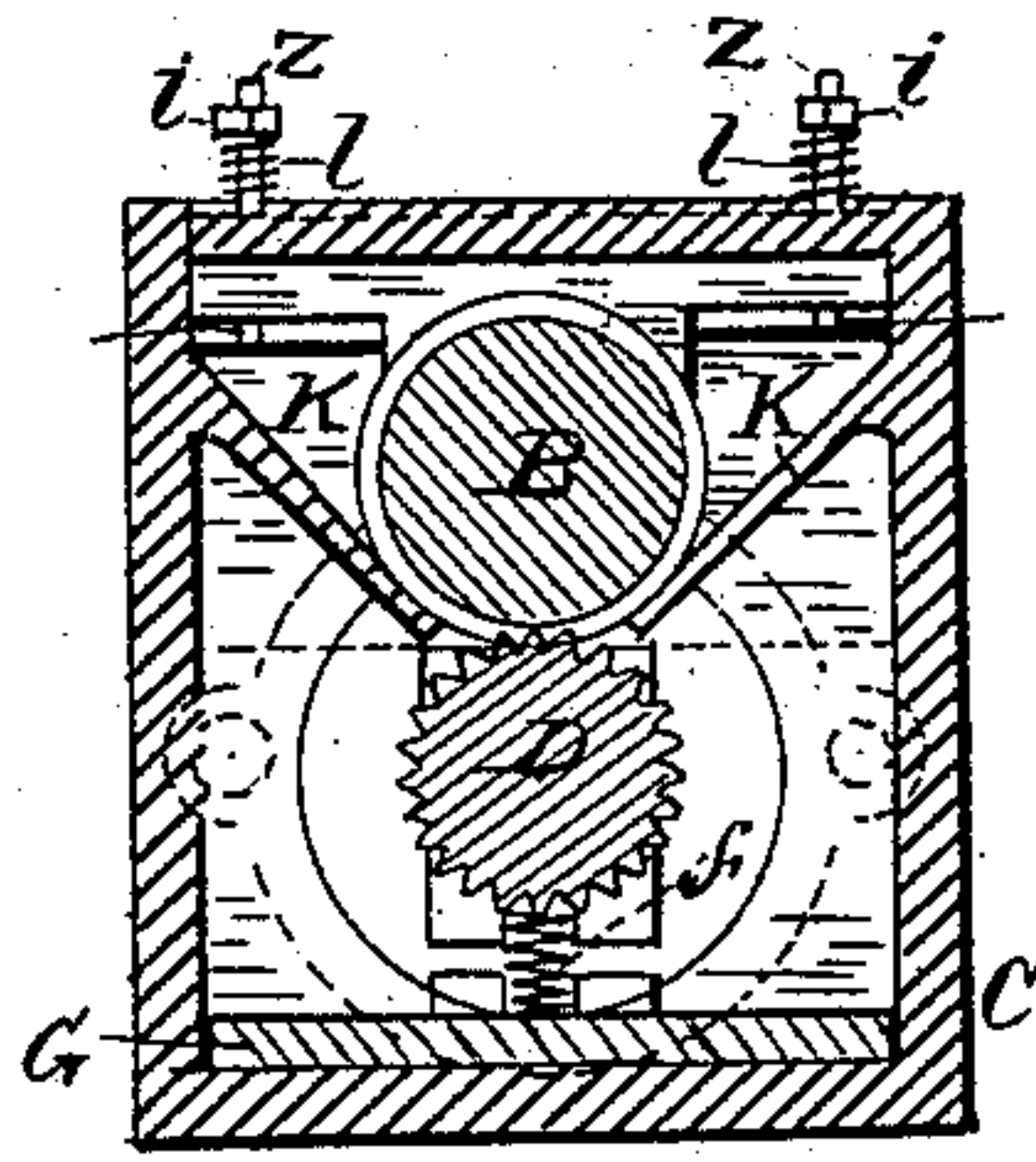


Fig. 5.

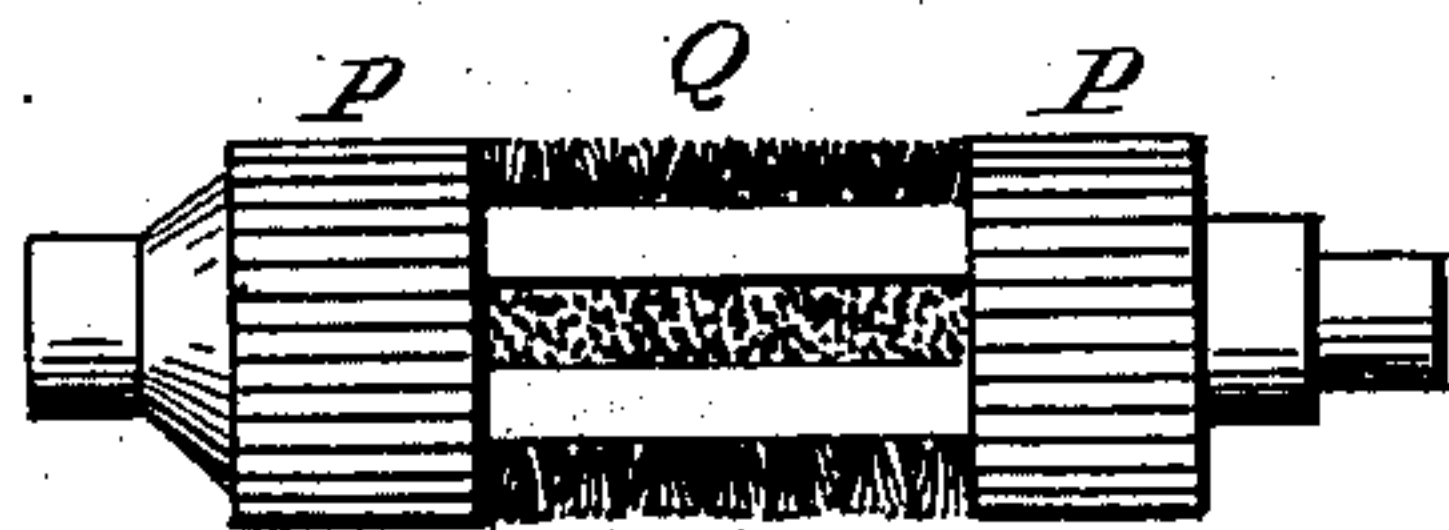


Fig. 6.

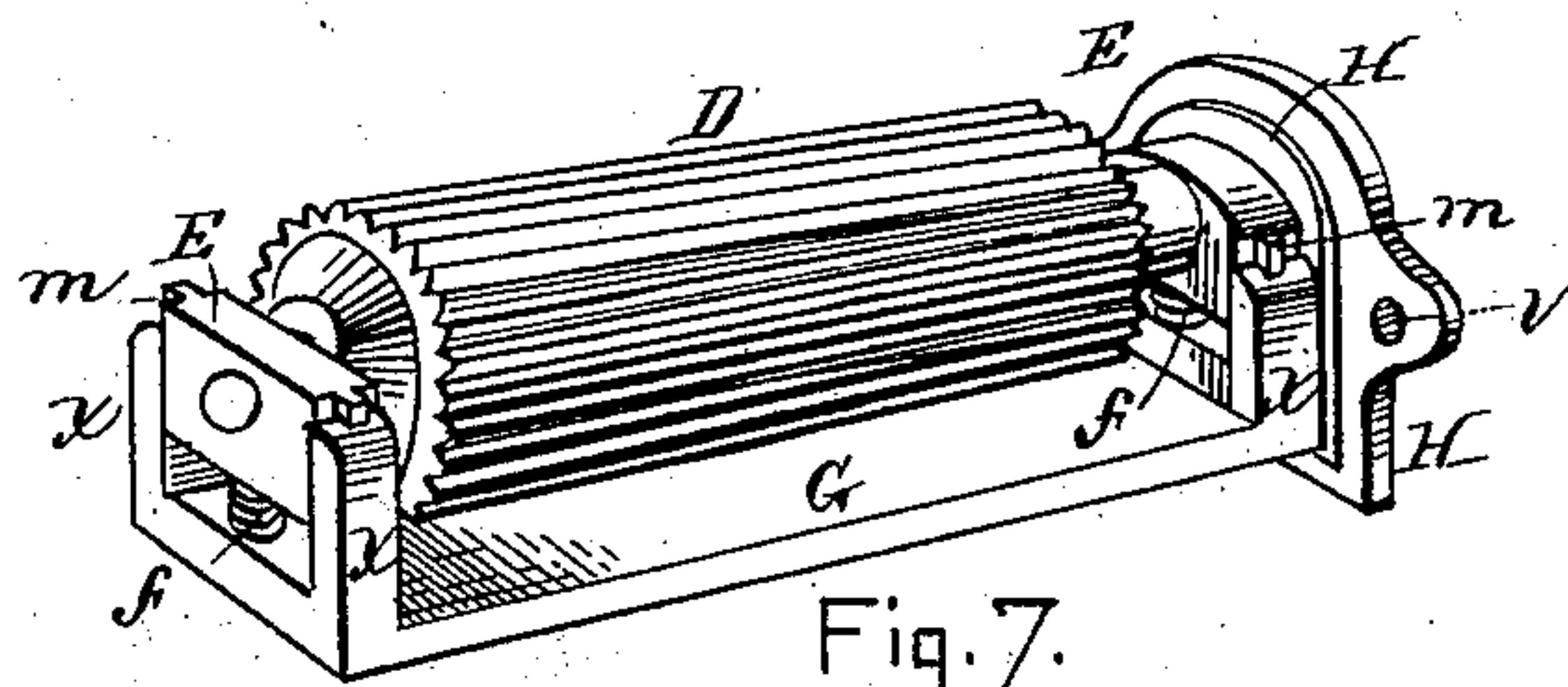


Fig. 7.

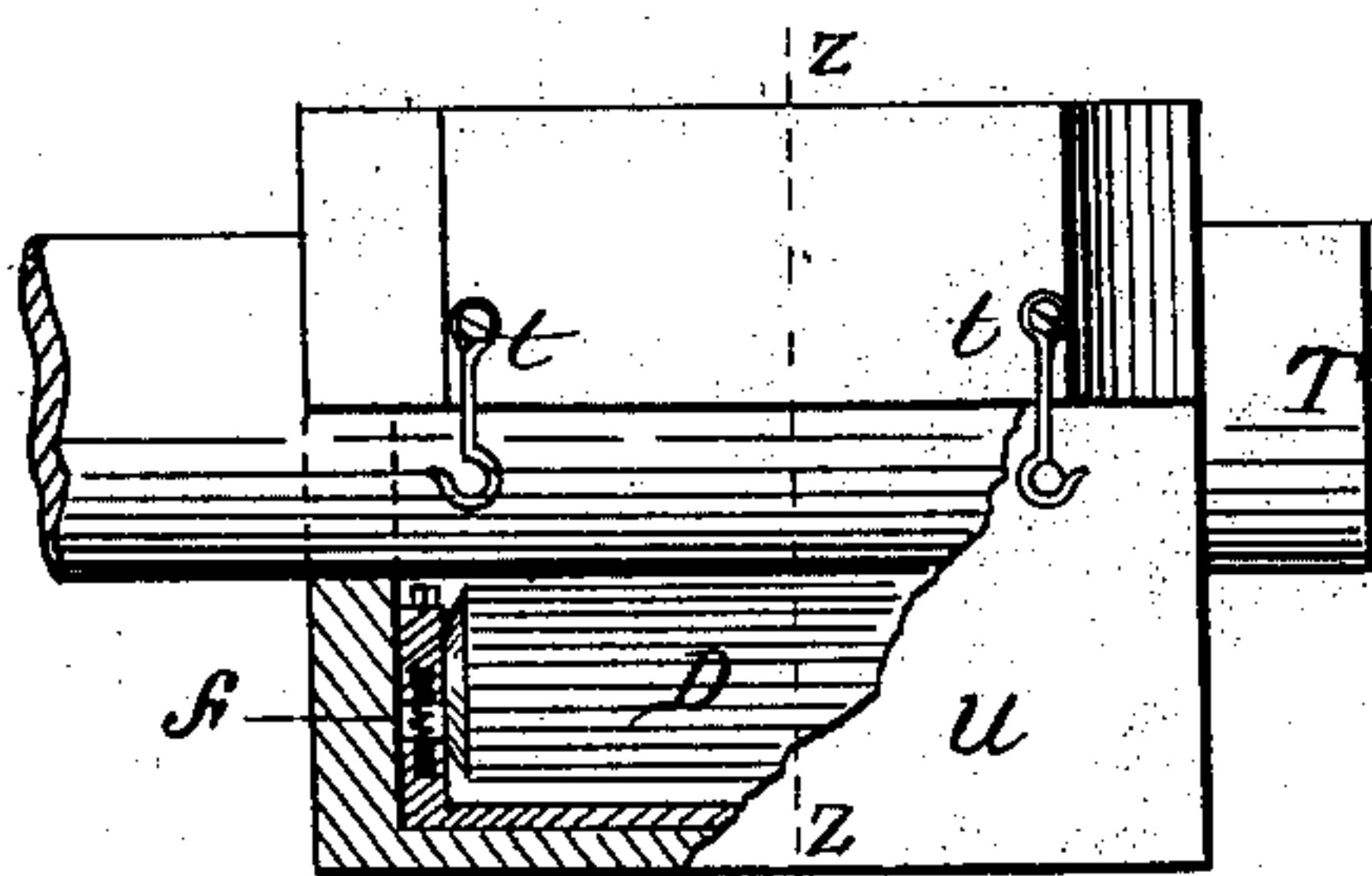


Fig. 8.

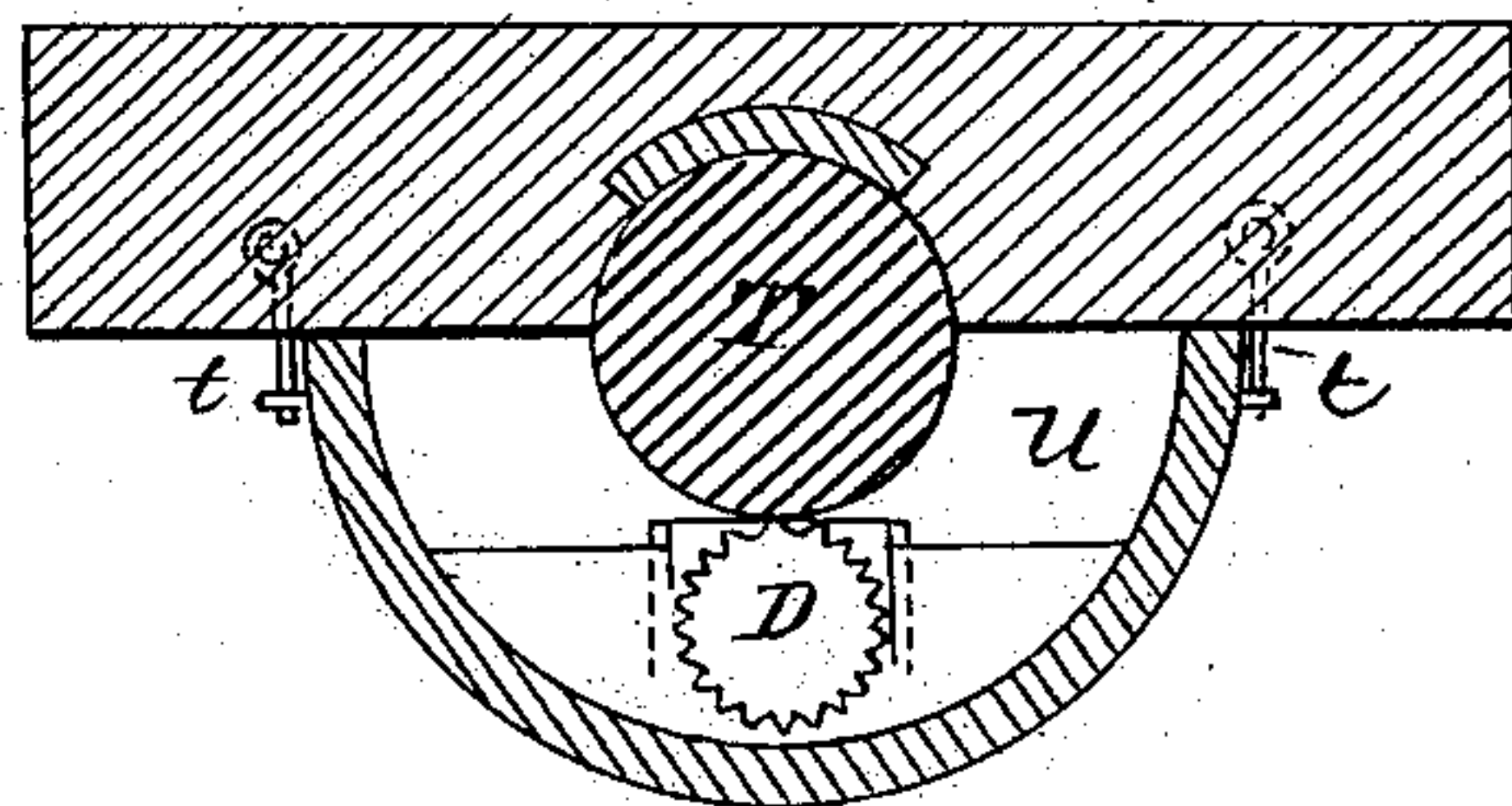


Fig. 9.

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UNITED STATES PATENT OFFICE.

GEORGE K. WATERHOUSE, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
HIMSELF AND JAMES MORSE, OF SAME PLACE.

OILER FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 291,247, dated January 1, 1884.

Application filed June 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE K. WATERHOUSE, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Oilers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view, showing my improved oiler as applied to the axle of a railway-car; Fig. 2, a vertical longitudinal section; Fig. 3, an end view of the oiler proper detached; Fig. 4, a vertical transverse section of the rear end of the oiler and axle-box; Fig. 5, a vertical transverse section taken on the line *x* of Fig. 2; Fig. 6, a side elevation, showing a modification of the oiler-roll; Fig. 7, an isometrical perspective view of the oiler proper detached; Fig. 8, a sectional side elevation representing the oiler-roll applied to an ordinary journal, and Fig. 9 an end view of the same.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates more especially to means for oiling or lubricating the axles of railway-cars; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

In the drawings, A represents the car-wheel, B the axle, and C the box.

The oiler proper consists of a cylindrical fluted rubber roller, D, journaled horizontally in the boxes E E, which are fitted, by means of the ways *m*, to slide vertically in the standards *x x*, and provided with the coiled springs *f f*, as best seen in Fig. 7. The standards are connected at their lower ends by a bed-piece, G, which is attached at its outer end to the face-plate H, provided with the screw-holes *v*. The bed G, provided with the standards *x* and face-plate H, and carrying the boxes E

and springs *f*, constitutes a carriage for the roller D, and also a cover for an opening, J, which is formed in the outer end, *y*, of the axle-box C, and through which the oiler proper is introduced into said box, as best seen in Fig. 2. Disposed within the axle-box, and preferably cast integral therewith, are two inclined plates, K K, projecting from the inner sides of the box, near its top, downwardly beneath the axle B nearly into contact with the roller D, as shown in Fig. 5, the plates extending from the rear toward the front and nearly the entire length of the box. The rear end of the axle-box is double, or provided with two walls, L L, and arranged between these walls and adapted to press against the lower side of the axle there is a curved plate, M, to the upper side of which are attached two rods, *z z*, provided at their upper ends with the nuts *i i*, and with coiled springs *l l*, which rest on the top of the axle-box and act expansively against the nuts to constantly draw the plate M upwardly against the axle. The springs *f f* act expansively to force the roller D upwardly and to keep it in constant contact with the axle B.

In the use of my improvement the oiler proper, as shown in Fig. 7, is introduced into the axle-box through the hole or opening J, and secured by means of the screws *b*, passing through the holes *v* in the plate H into the outer end of said box. The box is then properly filled with oil, or the lubricating compound to be used, through an opening or cover at N, or any other proper aperture for that purpose, the quantity of oil being such as to partially submerge the roller D, or so that when the axle revolves, the roller, which is in contact therewith and is revolved thereby, will take up the oil and lubricate the axle in a manner which will be readily understood by all conversant with such matters without a more explicit description.

The object of the plates K is to act as guards or scrapers to prevent the roller D from carrying too much oil to the axle when the roller is rapidly revolved.

The object of the plate or slide M is to pack the axle at the inner end of the box in such a

manner as to prevent the dust or dirt from entering the box through the opening *g* beneath the axle.

5 The roller *D* is preferably composed of rubber, and fluted or corrugated, as shown in Fig. 7, but may be composed of leather, felt, or any other suitable material, if desired.

10 In Fig. 6 a modification of the roller is shown, the ends *P P* being composed of rubber and fluted, and the center provided with a cylindrical brush, *Q*.

Instead of the roller *D* a cylindrical brush may be used, if desired, or one or more smaller rollers.

15 The bearing of the axle or babbitt *R* is placed at the top of the box in the usual manner.

20 It will be obvious that the axle will be constantly supplied with oil by the roller *D*, and thereby prevented from heating, and that my improvement entirely obviates the necessity of packing or stuffing the box with cotton waste in the usual manner, thus making a very large saving in the expense of lubricating the axle.

25 It will also be obvious that an oiler constructed on this principle is equally well adapted to nearly all ordinary horizontally-arranged journals or shafts, the roller being inclosed in a proper box for containing the oil or lubricating material and placed beneath the journal, as shown in Figs. 8 and 9, in which 30 *T* represents the journal, *U* the box, and *D* the roller, the box being suspended beneath the axle by means of the hasps *t*, or in any other convenient manner.

35 I do not confine myself to forcing the plate

M into contact with the axle by means of the spring *l*, rods *z*, and nuts *i*, as a spring may be arranged below said plate or in some other position to accomplish substantially the same 40 result. Neither do I confine myself to constructing the guards *K* inclined, as shown, as they may be arranged horizontally or at some other angle and perform the same functions.

45 It will be obvious that the carriage containing the roller when removed from the box will afford ample facilities for cleaning out the box through the hole *J*, the plate *H* being packed in any suitable manner to prevent the box from leaking when the carriage and roller are 50 in position for use, as shown in Fig. 2.

A liquid lubricant is preferable for use with my improved oiler, but ordinary axle-grease or any semi-liquid lubricant may be used with the same to good advantage. 55

Having thus explained my invention, what I claim is—

1. The combination of a box adapted to contain oil, having bearings for the journal to be lubricated, a longitudinally-fluted roller com- 60 posed of elastic material, the flutes being open at the ends, and means for retaining said roller in contact with the journal, substantially as described.

2. A roll for lubricators, composed in part 65 of rubber fluted longitudinally and in part of brushes arranged between the rubber parts, substantially as described.

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Witnesses:

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