

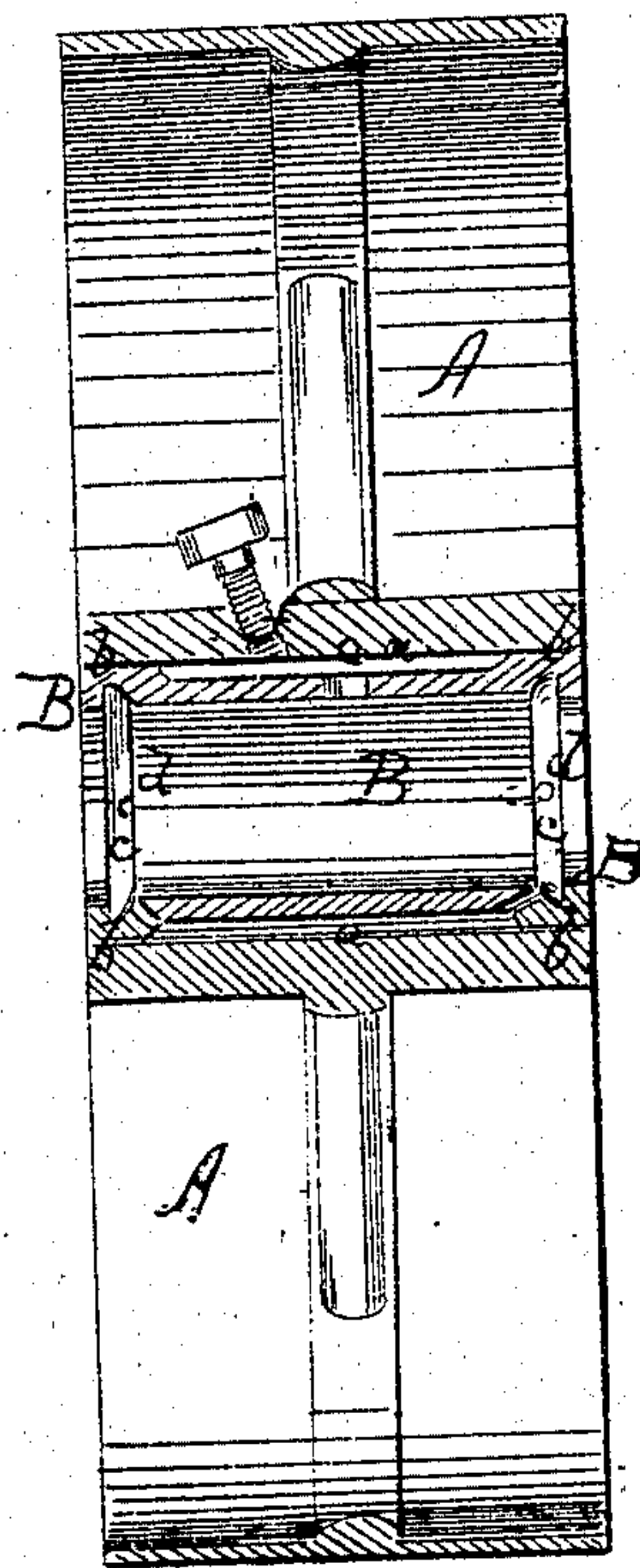
# *G. M. Morris and J. M. Creary, Loose Pulley.*

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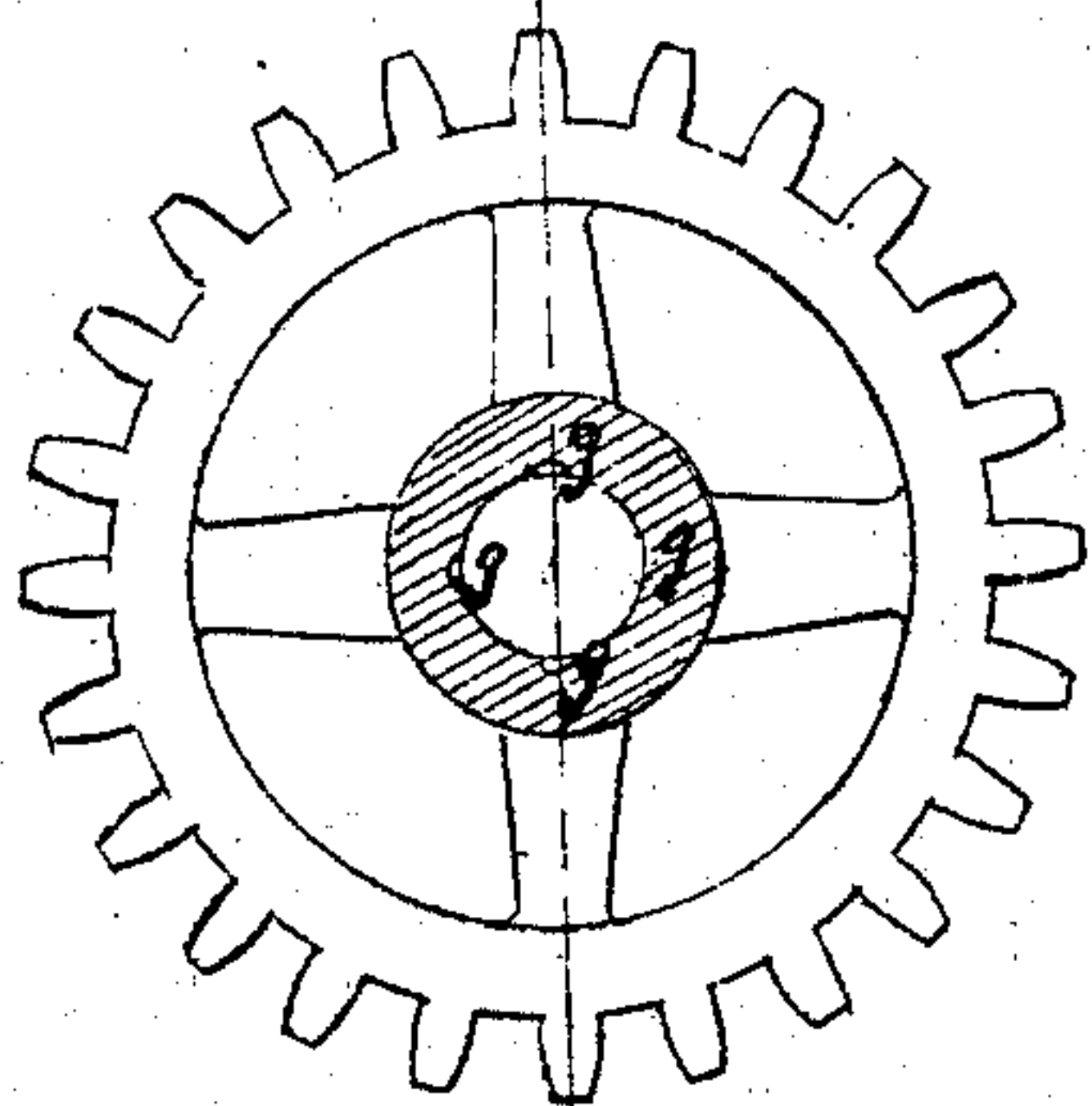
*Fig: 1.*

PATENTED

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*Fig: 3.*



*Fig: 2.*



*Witnesses*  
*Alex. F. Roberts*  
*Wm. Brown*

*Inventor*  
*G. M. Morris*  
*J. M. Creary*  
*per themselves*  
*attorneys*



# United States Patent Office.

GEORGE M. MORRIS AND JOHN McCREARY, OF COHOES, NEW YORK.

*Letters Patent No. 74,116, dated February 4, 1868.*

## IMPROVEMENT IN LUBRICATOR FOR LOOSE PULLEY

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

TO ALL WHOM IT MAY CONCERN:

REISSUED

Be it known that we, GEORGE M. MORRIS and JOHN McCREARY, of Cohoes, in the county of Albany, and State of New York, have invented a new and useful Improvement in Loose Pulleys, Gear-Wheels, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal section of our invention.

Figure 2 is a longitudinal section of a modification of the same.

Figure 3 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of forming the recesses, channels, or grooves in the hubs of loose pulleys, gear or other wheels, or in the bushings fitted into their hubs.

The invention consists in providing channels in or around the inner and outer surfaces of the bushings, and in connecting the same with each other, in such a manner that the oil can flow from the outer channel to the shaft, and that the same will, when it reaches the end of the bushing, be collected into the interior grooves, whence it returns to the outer channel. Thus the oil will circulate around the bushing, and will not be wasted and lost through the ends as it now is, but will last until completely used up for lubricating purposes.

Where no bushing is used, the inner surface of the hub is recessed or grooved to form channels for retaining the oil.

A represents a loose pulley or gear-wheel, having a bushing, B, within its hub. The outer periphery of the bushing B contains a chamber, *a*, extending almost from end to end of the bushing, as shown in fig. 1, the said channel being enclosed by shoulders *b*, formed on the ends of the bushing. Within the interior surface of the bushing are formed concentric grooves *c c*, one near each end of the bushing. By means of holes *d d*, the grooves *c* are connected with the chamber *a*, and the latter is also connected with the inner full surface of the bushing, by means of a hole, *e*. The chamber *a* receives its supply of oil or lubricating-matter through a hole, *f*, which can be closed by means of a screw-plug, as shown. When the pulley is hung upon a shaft so that the end of the hole *e* leads directly to the surface of the shaft, the lubricating-matter contained in the chamber *a* will flow upon the shaft through the hole *e*, and will lubricate the shaft. As it is being carried to one or the other end of the bushing, the lubricating-matter will be collected in the grooves *c*, whence it will return through the holes *d* to the chamber *a*. Thus no lubricating-matter is allowed to escape at the ends of the bushing, and none will consequently be wasted, so that a small amount of lubricating-matter can be made to last for a comparatively long time. The grooves *c c* may, if desired, be arranged spiral or even lengthwise, in the inner surface of the bushing. When no bushing is used, the interior of the hub is grooved, as shown at *g g* in figs. 2 and 3, whereby the lubricating-matter can be retained on the shaft within the hub.

We claim as new, and desire to secure by Letters Patent—

The bushing B within the hub of the loose pulley, constructed as described, having the chamber *a* around its periphery, communicating with the shaft by means of the opening *e*, the ends *b* of said bushing fitting snugly within the hub, and provided with the concentric groove *c*, communicating with the shaft and chamber *a* by means of the opening *d*, whereby a constant circulation of lubricating-matter is obtained within and around the bushing, as herein shown and described.

GEORGE M. MORRIS,  
JOHN McCREARY.

Witnesses:

JOHN POWERS,

ARTHUR E. ASHDOWN.