

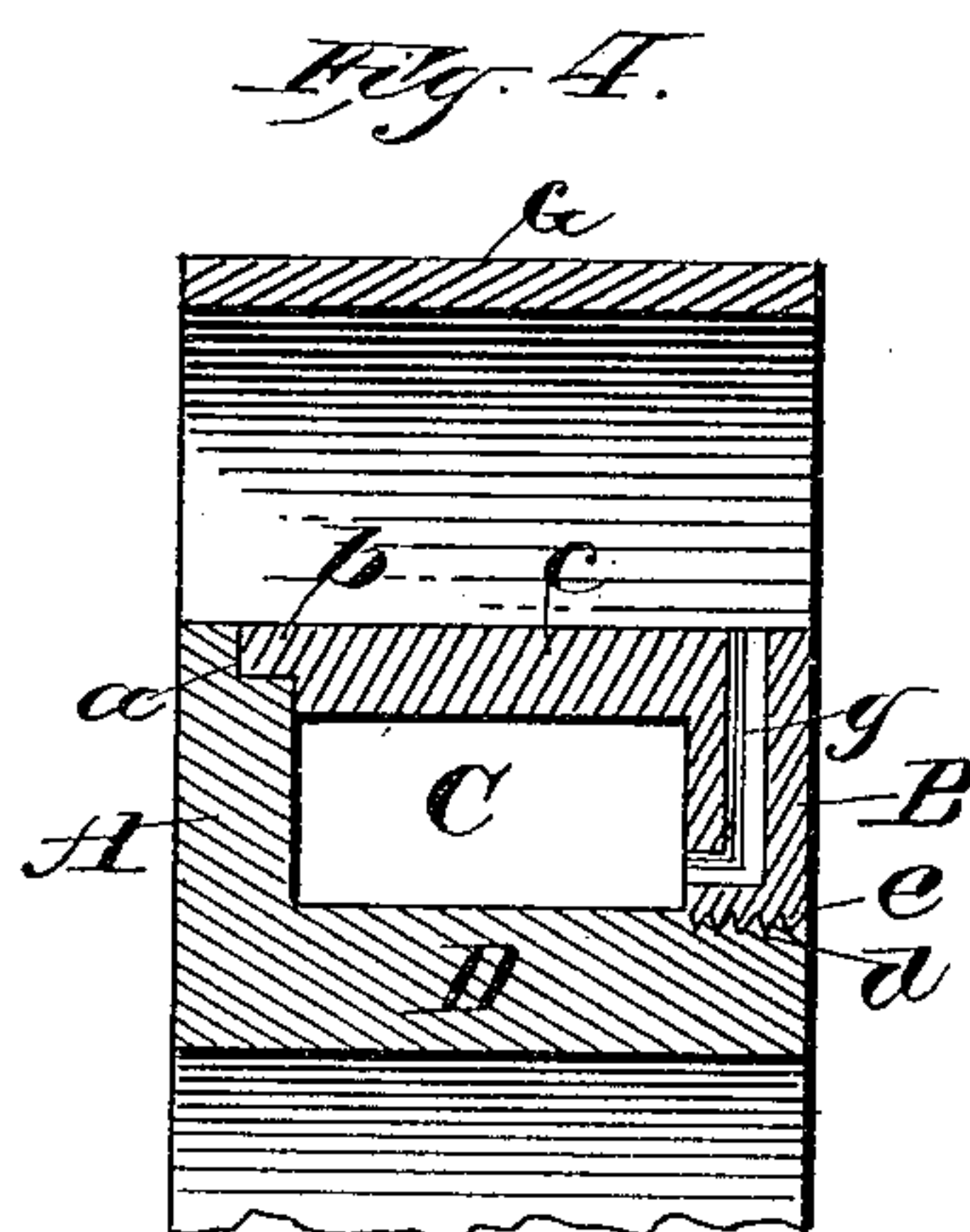
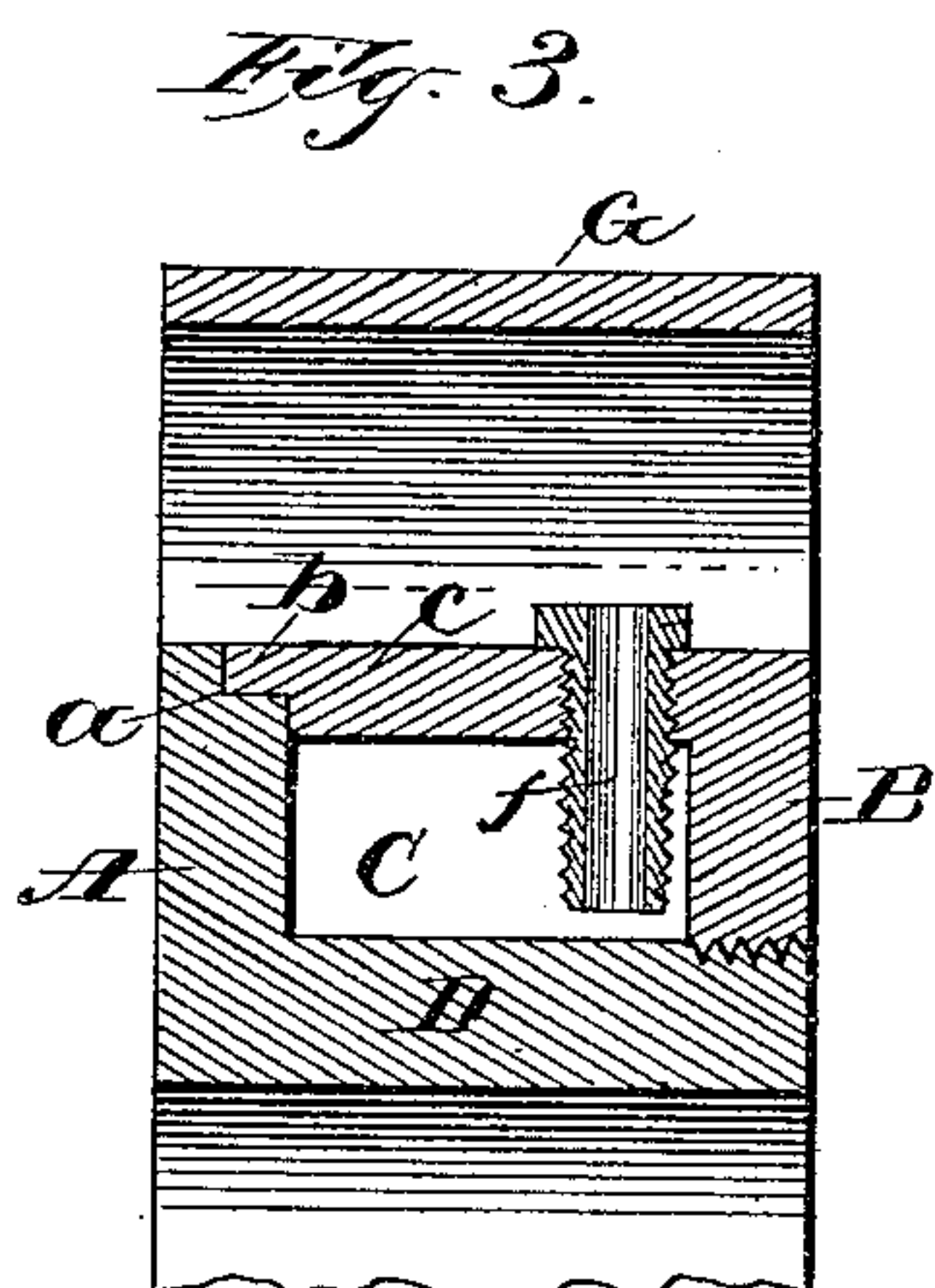
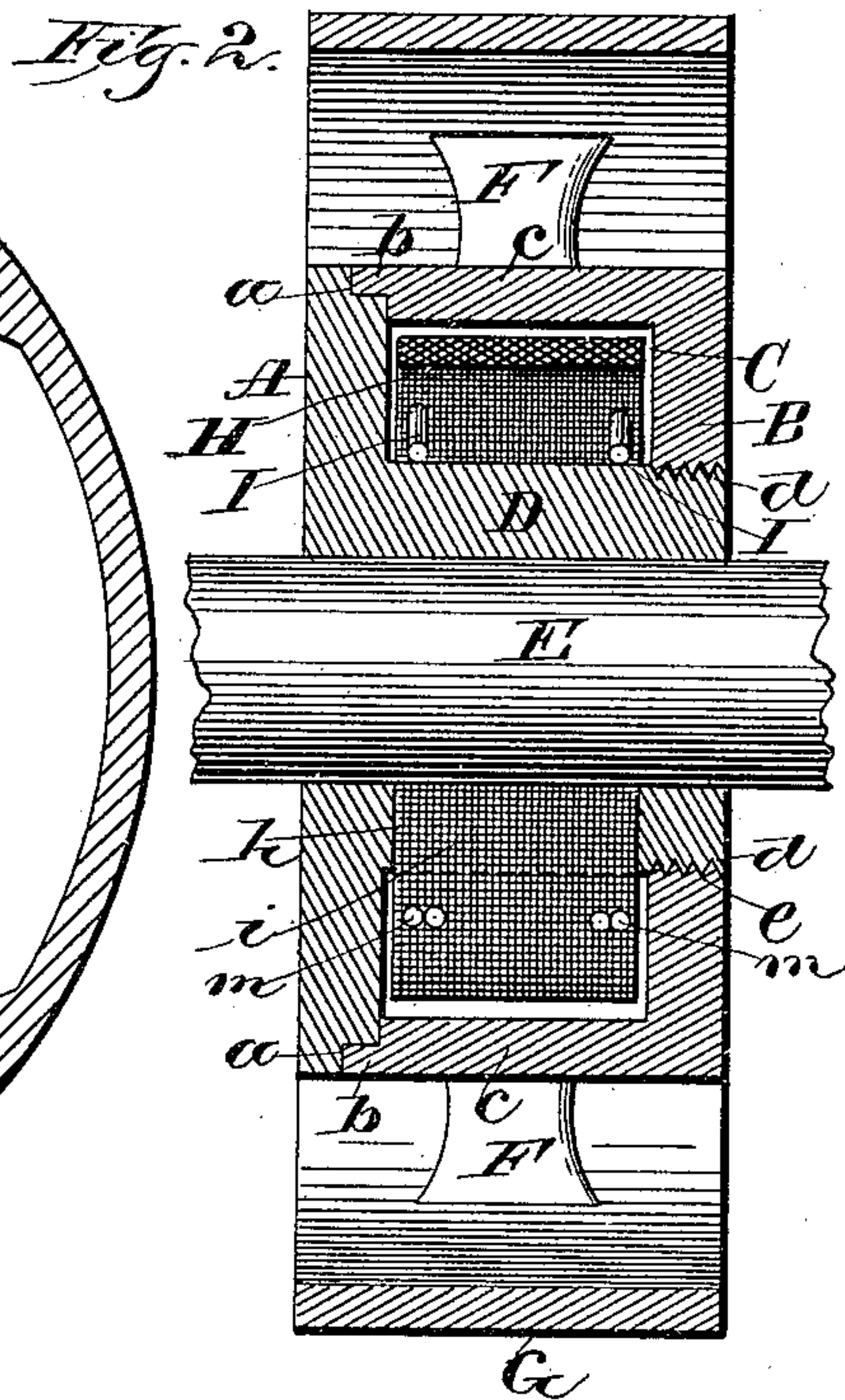
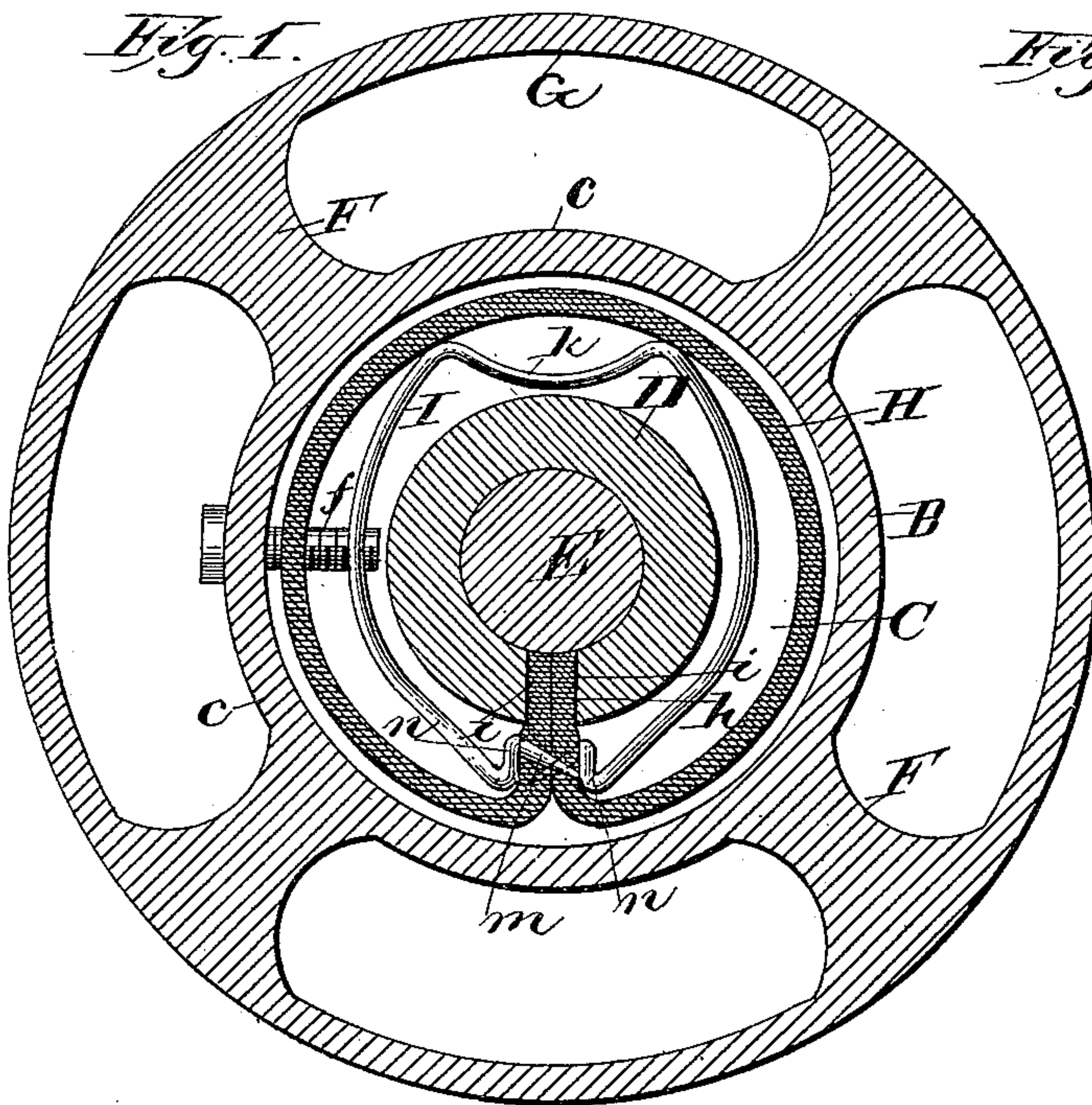
(No Model.)

W. LOEFFLER.

LUBRICATOR.

No. 354,156.

Patented Dec. 14, 1886.



**Witnesses:**

E. G. Sumner  
N. E. Oliphant

*Time for:*

William Loeffler

By J. Stout & Underwood  
Attorneys.



# UNITED STATES PATENT OFFICE.

WILLIAM LOEFFLER, OF SHEBOYGAN, WISCONSIN.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 354,156, dated December 14, 1886.

Application filed March 16, 1886. Serial No. 195,412. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM LOEFFLER, of Sheboygan, in the county of Sheboygan, and in the State of Wisconsin, have invented certain new and useful Improvements in Lubricators for Loose Pulleys; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to lubricators for loose pulleys; and it consists in certain peculiarities of construction, as will be fully described hereinafter with reference to the accompanying drawings, in which—

Figure 1 represents a vertical transverse section of my invention in operative position; Fig. 2, a vertical longitudinal section of the same; and Figs. 3 and 4 are detail sectional views showing induction-ports for the lubricant.

Referring by letter to the drawings, my pulley is represented as composed of two detachably-united sections, A B, so constructed that when joined together their interior faces form a chamber, C.

The section A has its rim provided with an annular recess, *a*, that receives a corresponding tongue, *b*, formed by cutting away the adjacent rim *c* of the section B, thereby securing a tight joint when the parts are united. The central portion, D, of the section A forms the bushing for a shaft, E, and has its free end screw-threaded, as shown at *d*.

The outer wall of the section B is provided with a central opening of a diameter equal to that of the bushing D, and the circumference of this opening is screw-threaded, as shown at *e*, to engage the threads on said bushing, this construction serving to firmly retain both sections in operative relation.

Radiating from the rim *c* of the section B are a series of spokes, F, that support the main rim G, said section, spokes, and latter rim being preferably of integral construction, as illustrated by Fig. 1. The rim *c* of the section B is provided with a screw-threaded opening to receive a corresponding-formed tube, *f*, that extends to nearly the depth of the chamber C, and the outer wall of this hub-section is bored out to form a passage, *g*, leading to said chamber, the entrance thereto being near the shaft-bushing D. The tube *f* and passage *g* serve as ports for the introduction of lubricant to the

chamber C, either or both of said ports being employed, as may be found desirable.

The bushing D is formed with a suitable orifice, *h*, adapted to receive the united ends *i* of a continuous strip of wicking, H, that is contained within the chamber C. This wicking is in the form of a circle, with its ends turned in so as to enter the orifice in the bushing and come in direct contact with the shaft E, the diameter of the circle formed by said wicking when first placed in position being equal to nearly that of its inclosing-chamber.

The wicking H is held out away from the bushing D by means of a spring, I, having inverted bow-shaped part *k*, designed to rest upon said bushing opposite the orifice therein. The ends *m* of the spring are pointed, so as to be inserted in the united ends *i* of the wicking H, these terminals of said spring having usually an angular bend or shoulder, *n*, that serves to bear against the latter substance. The contracting force of the spring I compensates for the wear of the wicking ends *i* by the revolution of the shaft E, and acts to keep said parts always in direct contact.

In the operation of my invention, the spring I and wicking H being placed in position with relation to the bushing D, the pulley-sections A B are united, as above described, to form the chamber C, that incloses said wicking. Oil or other lubricant is now introduced through either or both the ports *f g* to the chamber C, the amount being sufficiently limited so as to prevent overflow from these induction-ports as the pulley revolves. The wicking H absorbs the lubricant in the chamber C, and delivers it to the shaft E, on which the pulley operates, a fresh supply of this lubricant being from time to time introduced in said chamber to keep the wicking always saturated. As the revolution of shaft wears away the ends *i* of the wicking, the contracting force of the spring I toward the shaft-bushing D forces these wicking ends up in the orifice *h* of said bushing, to thus keep them in operative position.

I have described the wicking as one continuous strip bent in the form of a circle, and having its ends united and inserted in the orifice of the shaft-bushing, such arrangement being preferable; but I may employ two pieces or double the single piece at some point along



its length and insert this doubled portion in said orifice, leaving the ends free, the spring acting in either case to keep said wicking in constant contact with the shaft.

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

10 1. The combination of a loose pulley having a lubricant-chamber, with a wicking located in the chamber and arranged to impinge against the shaft to which said pulley may be connected, and a suitable spring for retaining the wicking in operative position, as set forth.

15 2. A loose pulley consisting of two detachably-united sections so constructed that when joined together their interior faces form a continuous lubricant-chamber, and one of said sections having its central portion in the form of a shaft-bushing provided with an orifice, in combination with a wicking located in the lubricant-chamber, and arranged to extend through the orifice in the bushing and come in contact with the shaft to which the pulley may be connected, as set forth.

25 3. A loose pulley consisting of two detachably-united sections so constructed that when joined together their interior faces form a continuous lubricant-chamber, one of said sections having its central portion in the form of a shaft-bushing provided with an orifice, and 30 the other section provided with an induction port or ports leading to the lubricant-cham-

ber, in combination with a wicking located in said chamber, and arranged to extend through the orifice in the bushing and come in contact with the shaft to which said pulley may be connected, as set forth. 35

4. A loose pulley having a lubricant-chamber surrounding the shaft-bushing, in combination with a continuous strip of wicking located in the chamber and bent in the form of a circle, with its ends turned in and passed through an orifice in said shaft-bushing, and a suitable spring interposed between the latter parts, with its ends inserted in those of said wicking, as set forth. 40 45

5. A loose pulley having a lubricant-chamber, in combination with a continuous strip of wicking located in the chamber and bent in the form of a circle, with its ends turned in and passed through an orifice in the shaft-bushing, and a continuous spring interposed between these latter parts, and having pointed and shouldered ends inserted in the ends of said wicking, as set forth. 50 55

In testimony that I claim the foregoing I have hereunto set my hand, at Sheboygan, in the county of Sheboygan and State of Wisconsin, in the presence of two witnesses.

WILLIAM LOEFFLER.

Witnesses:

FRANK LOEFFLER,  
DAN TORK.