

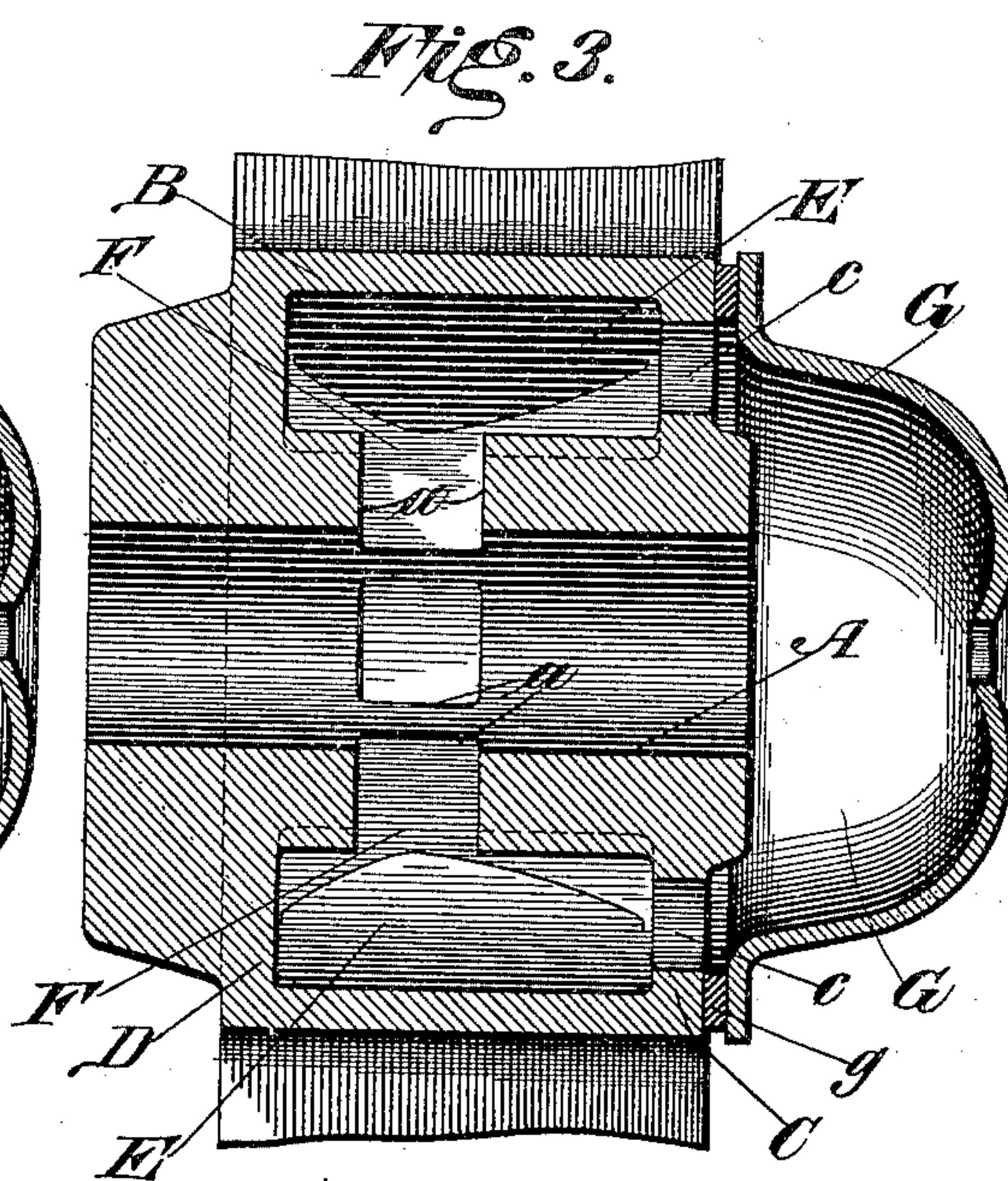
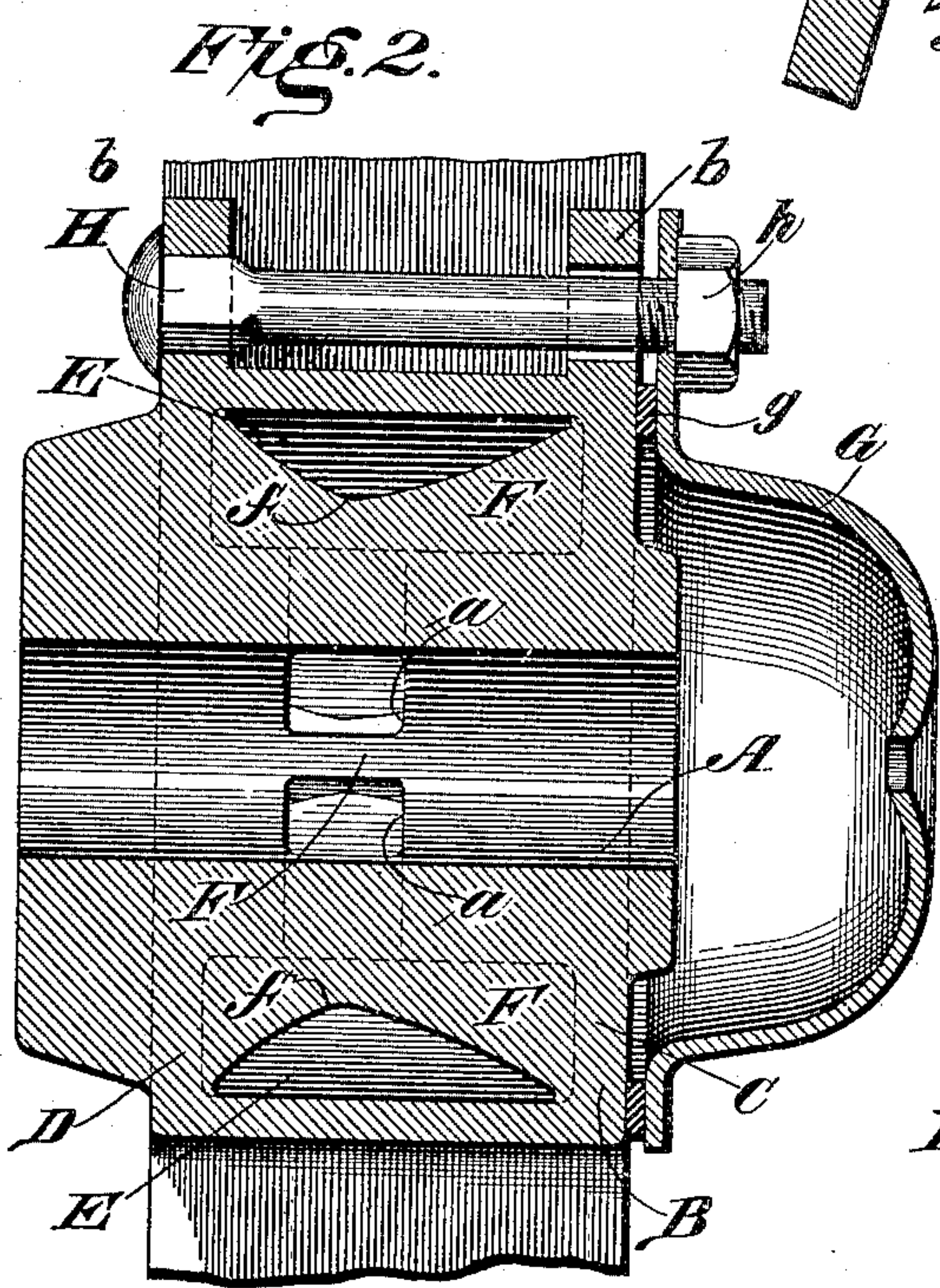
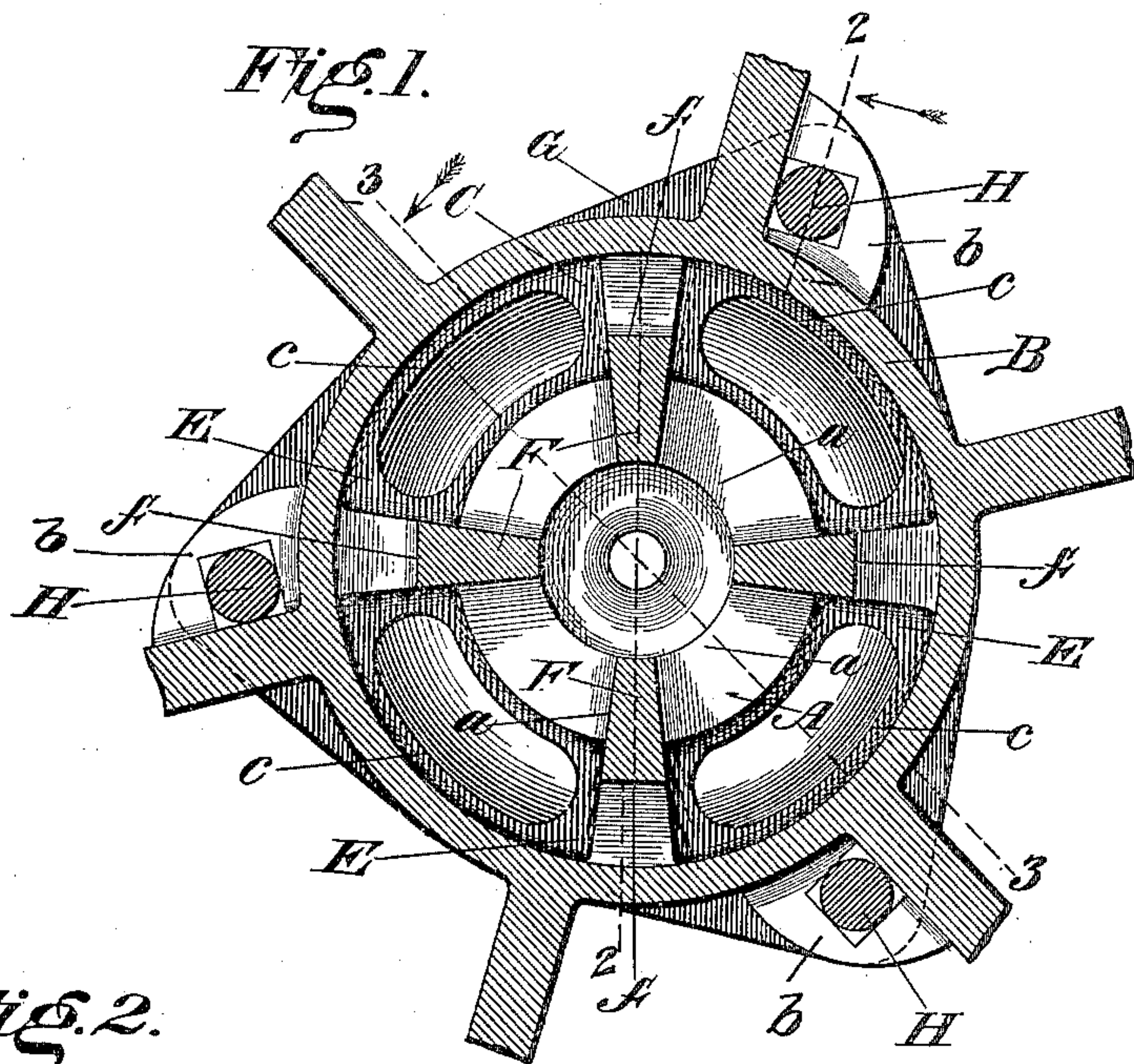
**No. 684,763.**

Patented Oct. 15, 1901.

S. WATT.  
LUBRICATING HUB.

(Application filed May 9, 1901.)

(No Model.)



*WITNESSES*

M. E. Fowler  
James R. Mansfield.

*INVENTOR:*

By: *Stewart Watt*  
*Alexander F. Fowell.*  
Attorneys



# UNITED STATES PATENT OFFICE.

STEWART WATT, OF BARNESVILLE, OHIO, ASSIGNOR TO THE WATT MINING  
CAR WHEEL COMPANY, OF BARNESVILLE, OHIO.

## LUBRICATING-HUB.

SPECIFICATION forming part of Letters Patent No. 684,763, dated October 15, 1901.

Application filed May 9, 1901. Serial No. 59,522. (No model.)

*To all whom it may concern:*

Be it known that I, STEWART WATT, of Barnesville, in the county of Belmont and State of Ohio, have invented certain new and  
5 useful Improvements in Lubricating-Hubs; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

10 This invention is an improved lubricating journal-box or hub for wheels and pulleys, being especially designed for use on mining-car wheels, to produce what are ordinarily termed "self-oiling car-wheels," such wheels  
15 or pulleys ordinarily having an oil chamber or chambers in their hubs, whereby the journal or spindle on which the wheel turns is thoroughly lubricated during the revolutions of the wheel.

20 The invention in particular is an improvement upon the self-oiling car-wheel shown in my Patent No. 612,689, of October 18, 1898; and the particular objects of the invention are to strengthen the inner wall or sleeve of  
25 the hub, which fits upon the spindle or journal, to produce better circulation of the fluid during rotation of the wheel, and to insure a distribution of oil onto the spindle after the wheel stops. These objects I attain by the  
30 improved construction hereinafter claimed; and the invention is illustrated in the accompanying drawings as applied to the hub of a mine-car wheel, but may obviously be similarly applied to other wheels and pulleys.

35 In said drawings, Figure 1 is a central transverse section through the hub of a wheel or pulley. Fig. 2 is a longitudinal section thereof on line 2 2, Fig. 1; and Fig. 3, a similar section on line 3 3, Fig. 1.

40 The hub comprises an inner wall or sleeve A, inclosed in an outer cylinder B, of larger diameter, said sleeve and cylinder being united by end walls C and D, respectively. The sleeve A is bored out to fit neatly upon  
45 the spindle or shaft upon which the wheel is to be mounted, and preferably the whole hub is cast integral and when applied to mine-car wheels may be formed as an integral part of the wheel, the rim being united to the hub  
50 by spokes springing from the cylinder A, as indicated in the drawings and as described in my aforesaid patent. The annular space be-

tween the sleeve and cylinder is divided into several compartments E by means of longitudinal partitions F, which partitions extend 55 from one end wall to the other, but are preferably recessed on their outer sides at *f*, just within cylinder A, as shown, forming V-shaped openings through which the several compartments communicate, and the oil cir- 60 culates from one compartment to the other. These openings *f* are preferably triangular, and the partitions are tapered in cross-section, so as to increase in size from center outward, and practically constitute double abut- 65 ments or braces within the hub and between the sleeve A and cylinder B. Each compartment has a central opening *a*, leading through sleeve A, so as to admit oil onto the spindle or shaft on which the hub is journaled. Oil 70 is admitted to the compartments through openings *c* in end wall C, said openings being all inclosed by an end cap G, fitted onto end wall C of the hub and secured by bolts H and nuts *h*, said bolts transfixing eyes *b*, 75 cast on the cylinder A, as shown. A gasket *g* is interposed between cap G and the wall C to make an oil-tight joint therebetween, and oil can be poured into cap G through a small central opening therein, as shown. 80

The transverse tapered partitions F connect the sleeve to both end walls and to the cylinder, and during the revolution of the wheel the oil will be carried up continually and supplied to the spindle or shaft through 85 openings *a*, and when the wheel stops the oil in the uppermost chamber E can flow back onto and over the spindle, thus insuring a thorough lubrication of the bearings at all times. The spokes of the wheel may spring 90 from the cylinder A directly exterior to the partitions, so that there will be practically direct or continuous connections between the inner sleeve and the rim of the wheel. During the rotation of the wheel the partitions 95 keep the oil in motion and insure the proper supply thereof to the spindle.

Where self-lubricating hubs have been subjected to hard service, such as they must endure when formed on car-wheels, great an- 100 noyance has heretofore been caused by the frequent breaking of the inner sleeve, owing to the difficulty of preserving the oil-chamber and providing suitable bracing for the sleeve,

which is of course weakened by the oil-passages. This defect was largely overcome by my patented improvement above mentioned; but the present invention is superior to that  
5 in durability, strength, and lubricating effects and is practically about as strong as a solid hub.

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

The combination in a lubricating-hub for mining-car wheels, of inner sleeve A, outer cylinder B, end walls C, D, longitudinal partitions F, F, having openings wider at their

centers than at their ends, there being openings *a* in the sleeve, oil-cap G secured to the exterior of wall C, openings *c* being provided in said wall to admit oil from the cap to the several compartments, all substantially as  
15 and for the purpose described. 20

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

STEWART WATT.

In presence of—

JOHN D. MILLER,  
P. H. LAUGHLIN.