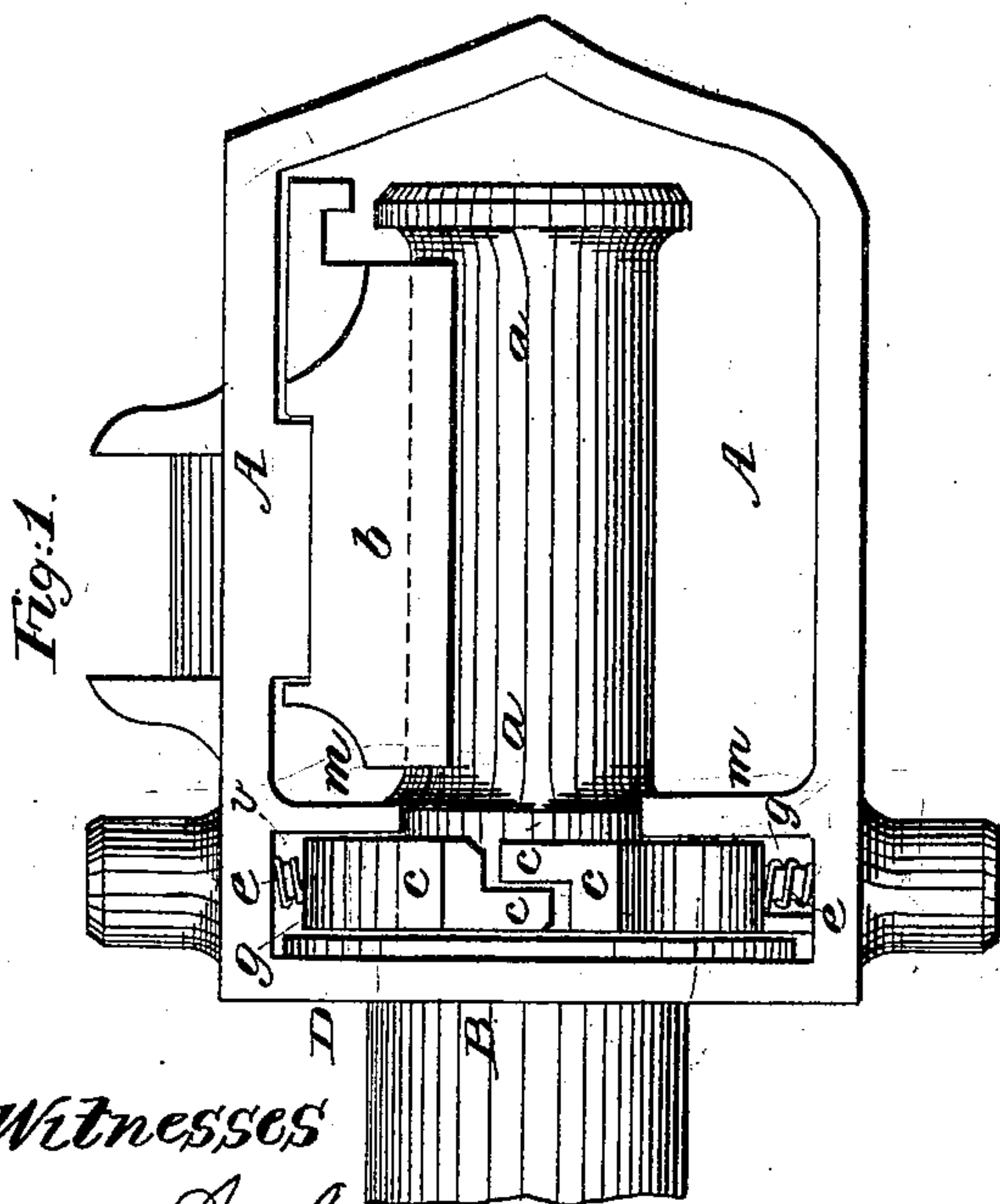
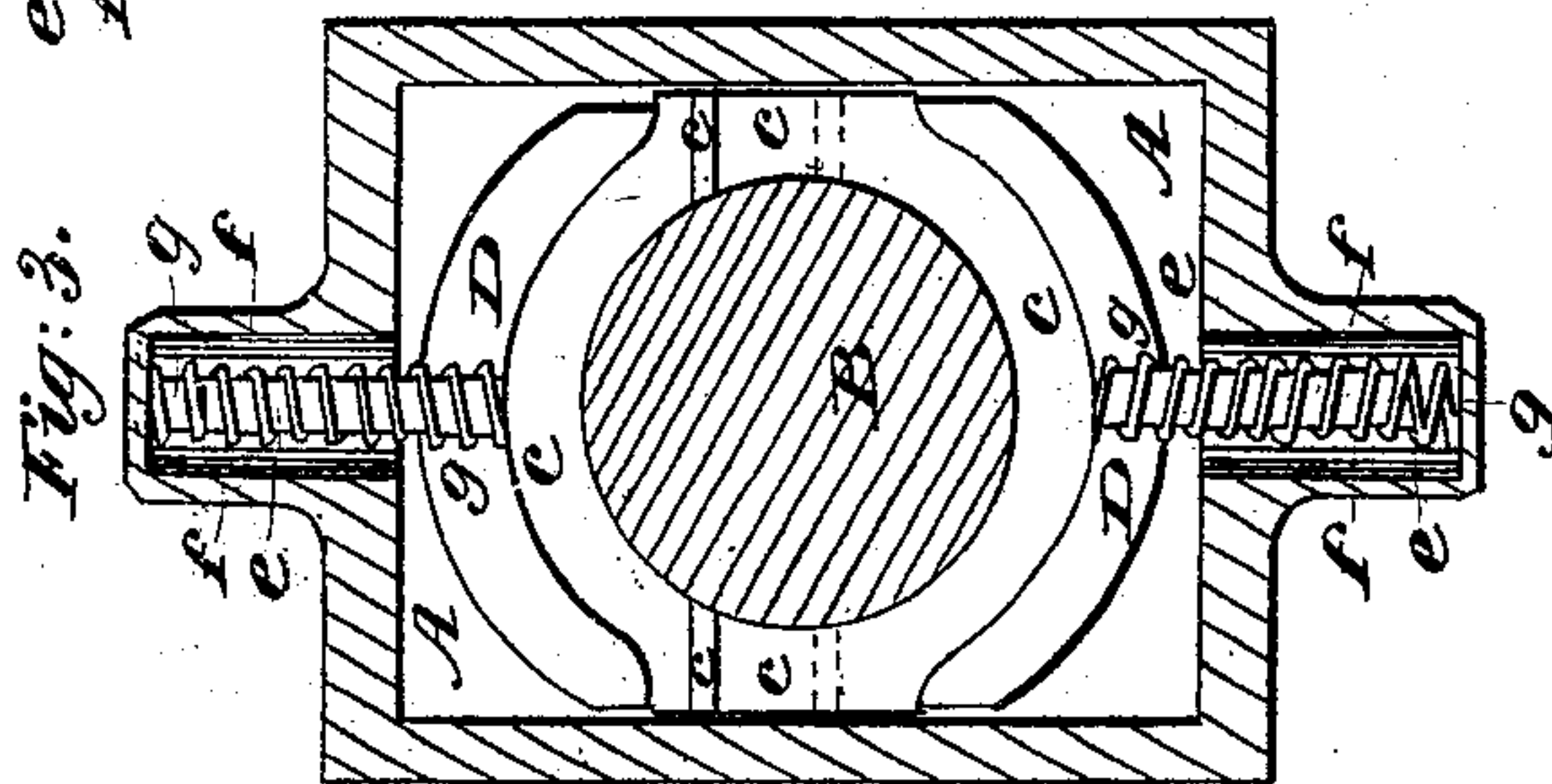
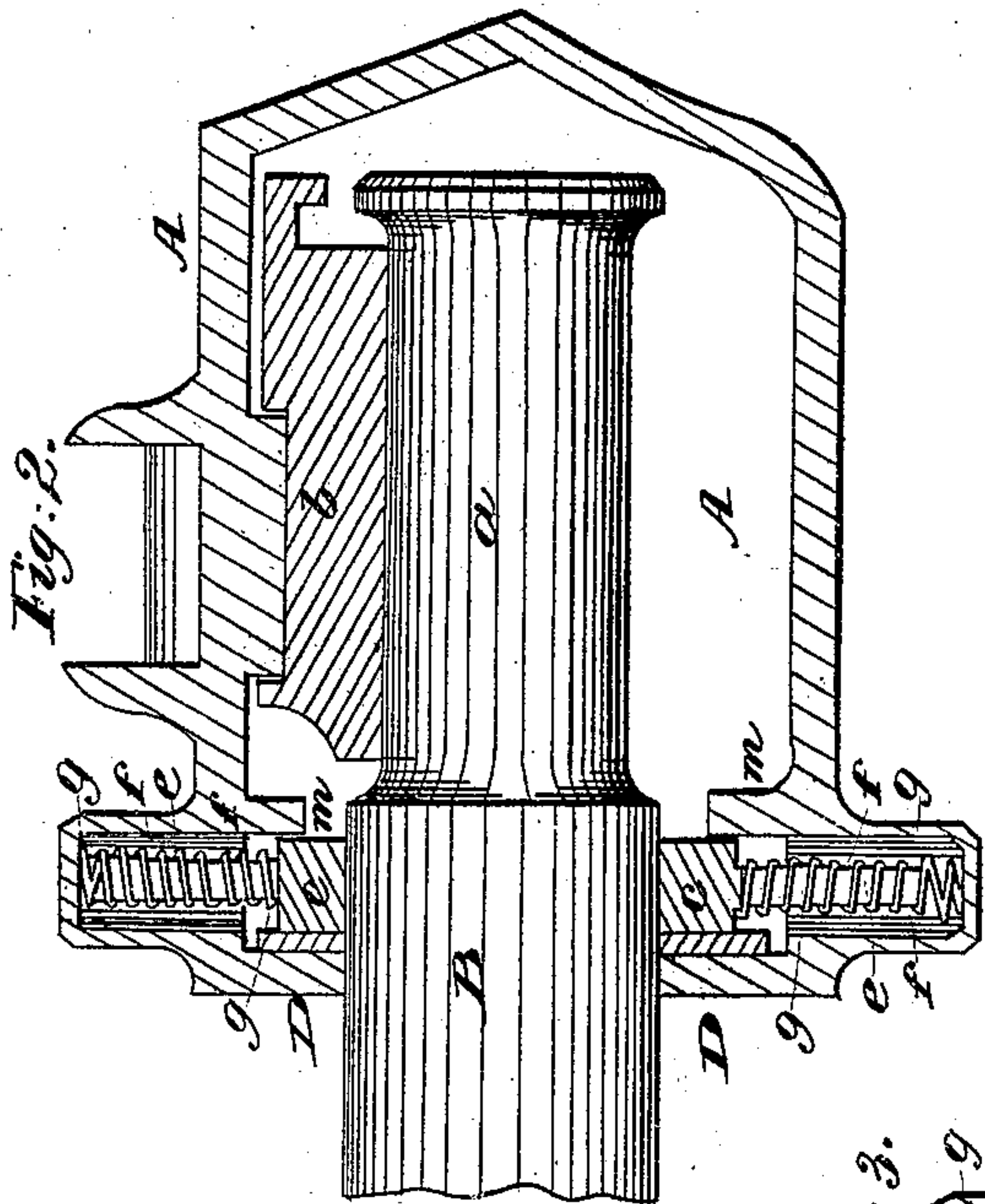


W. A. BOYDEN.

Car-Axle Box.

No. 71,125.

Patented Nov. 19, 1867.



Witnesses

McIndy
Geo. Reed

Inventor

W. A. Boyden
per Aaron Coombs & Co
Attys.

United States Patent Office.

WILLIAM A. BOYDEN, OF ALTOONA, PENNSYLVANIA.

Letters Patent No. 71,125, dated November 19, 1867.

IMPROVED AXLE-BOX.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM A. BOYDEN, of Altoona, in the county of Blair, and State of Pennsylvania, have invented a new and useful Improvement in Axle-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a side view of an axle-box constructed according to my invention, with one side of the case removed to show the internal parts.

Figure 2, a central vertical longitudinal section of the same.

Figure 3, a transverse vertical section of the same, taken in the line *x x*, of figs. 1 and 2.

Similar letters of reference indicate corresponding parts in all the figures.

The object of this invention is to provide an efficient means whereby the escape of lubricating material from the journals of car or other axles may be provided against, and the invention consists in two semicircular packing-plates, formed with rebated ends, and furnished with suitable pressure-springs, and so combined with an annular washer and with the journal and the bearing of the journal-box, as to effectually secure the result desired.

To enable others to understand the nature and construction of my invention, I will proceed to describe it with reference to the drawings.

A represents the box or casing of the apparatus, in which the lubricating material is placed. The cylindrical end portion of the car or other axle is shown at B, the said end passing into the case A through a suitable circular hole in the outermost end of the said case, and having the journal *a* formed thereon, made of a somewhat reduced diameter, and fitting into the under side of the bearing *b*, secured in the upper part of the casing A aforesaid, and constituting a portion of the axle-box, of which such case forms the other part. Fitted upon the axle B, within the case A and near the outer end of the journal *a*, are two semicircular washer-plates, C, which are placed one upon the upper, the other upon the lower side of such part of the axle, and are each rebated at their two ends, in such manner that lips or tongues *c* are formed thereon, the lips upon one of the aforesaid washer-plates lapping past or upon those of the other, in such manner as to break the joints where the ends of the two plates are brought together, as indicated more fully in fig. 1. Each of the aforesaid plates is furthermore provided with a vertical stem, *e*, which projects into a cylindrical recess or socket, *f*, provided in the adjacent side of the case A, the said stems being surrounded by spiral springs *g*, which press the plates C inward, with their inner surfaces in snug contact with the cylindrical portion of the axle upon which the said plates are situated, as just hereinbefore set forth. Placed around the axle, between the plates C and the contiguous end of the case A, is an annular washer, D, which may be of leather, or equivalent material. The plates C are kept in snug contact with the washer D by vertical partition-plates *m*, formed transversely upon the top and bottom of the case.

The case A has, of course, a suitable quantity of lubricating material placed therein, which lubricates the journal *a* to the required degree, the aforesaid lubricating material being prevented from escaping or working out from the case A around the cylindrical portion of the axle by the packing-plates C, pressed closely thereon by the springs *g*, and the leakage of the said lubricant, at the junction of the extremities of the aforesaid plates, being guarded against by the lapping past each other of the lips *c*, left upon the said extremities by rebating the same, as hereinbefore set forth. The washer D, by forming a close packing between the plates just mentioned and the contiguous end of the case A, prevents the outward passage of any portion of the lubricant that may find its way above or below the packing-plates, the lubricant being by these means effectually retained within the case A, thereby securing its most efficient and economical action in lubricating the journal.

What I claim as my invention, and desire to secure by Letters Patent, is—

The two semicircular packing-plates C, constructed with rebated ends, and furnished with springs *g*, in combination with the annular washer D, the journal *a*, and the bearing *b* of the axle-box, substantially as and for the purpose herein set forth.

WILLIAM A. BOYDEN.

Witnesses:

JOHN SHOEMAKER,
WILSON RINGLE.