

No. 670,034.

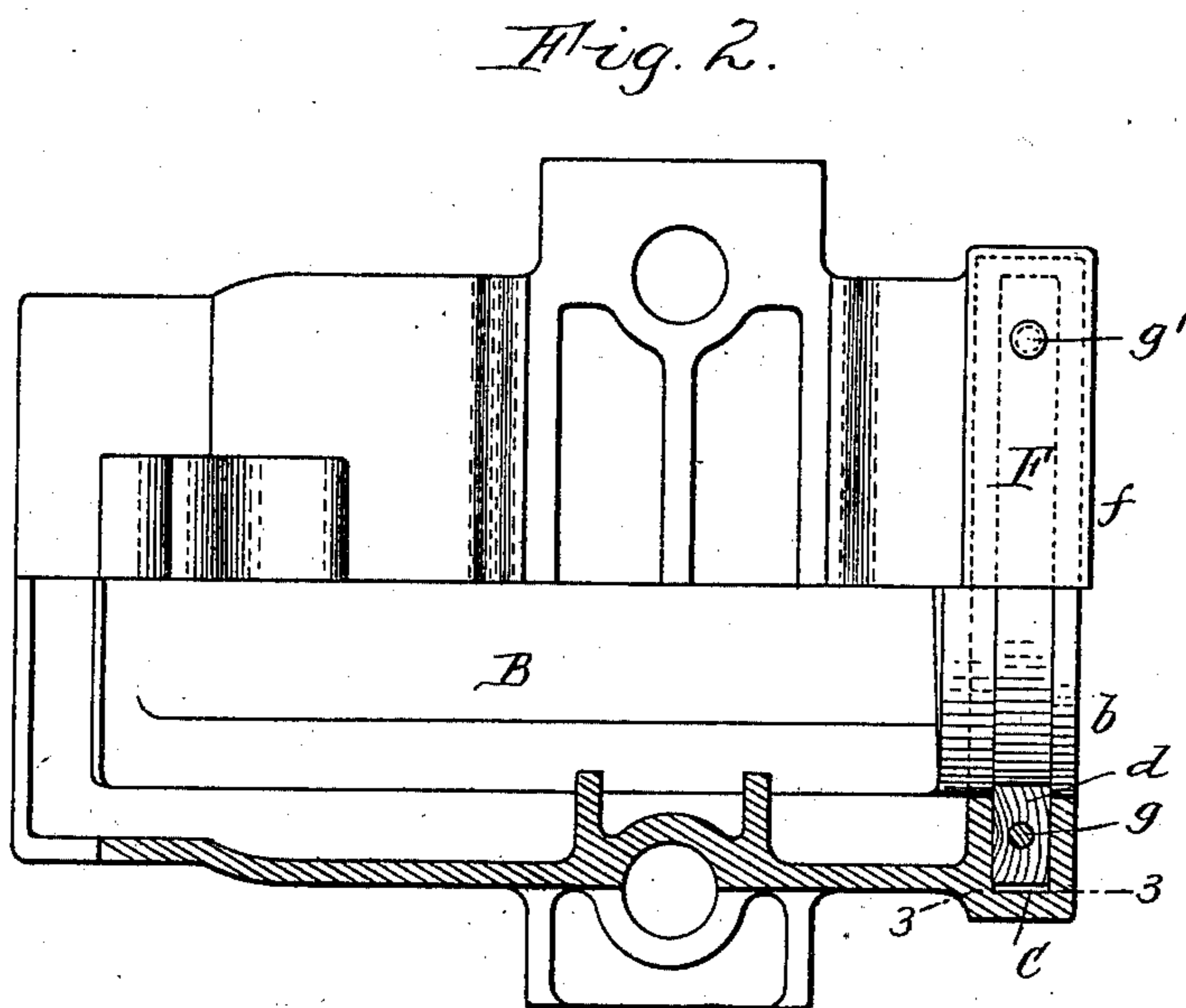
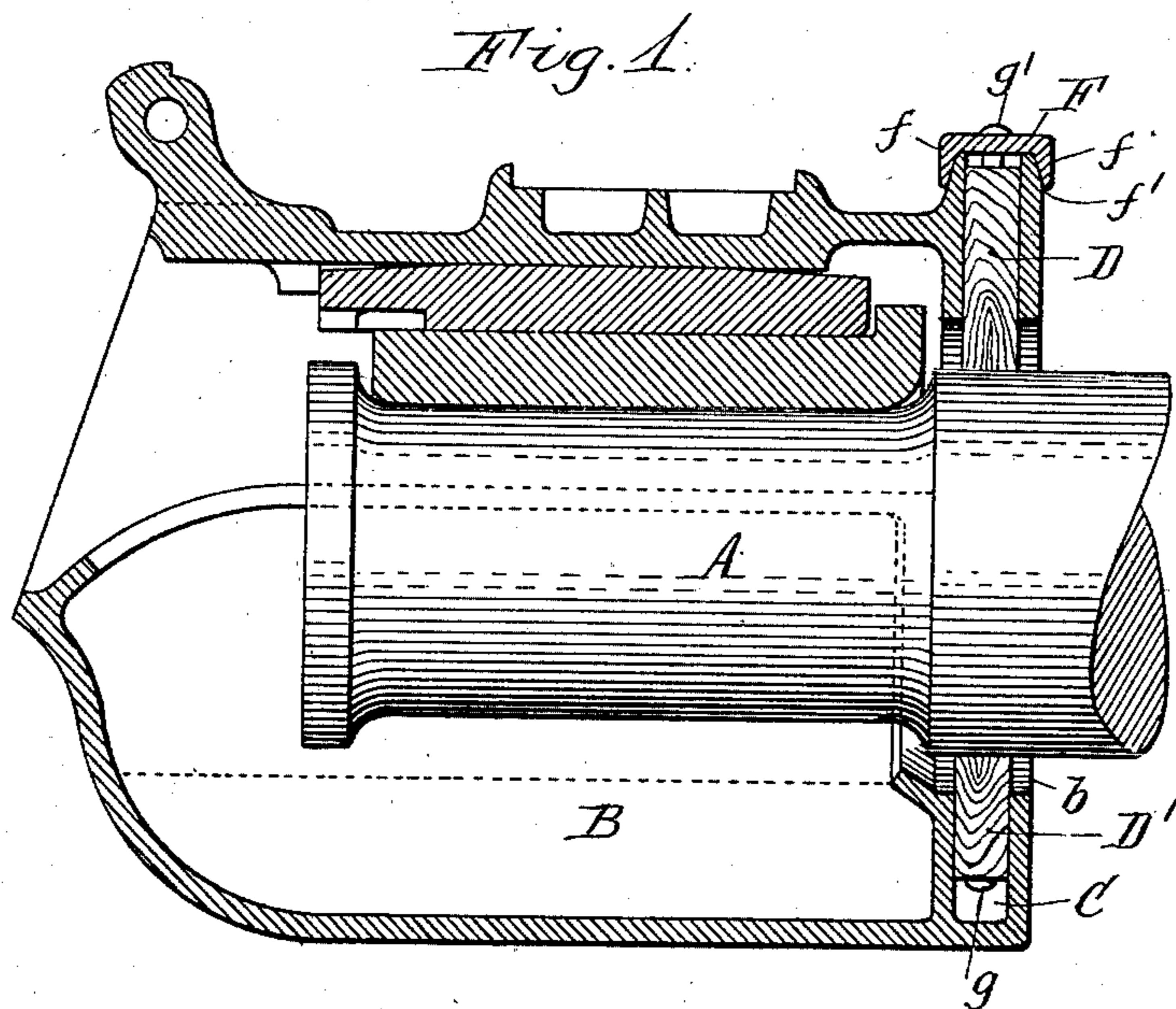
Patented Mar. 19, 1901.

W. F. RICHARDS.  
DUST GUARD FOR JOURNAL BOXES.

(Application filed Aug. 14, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

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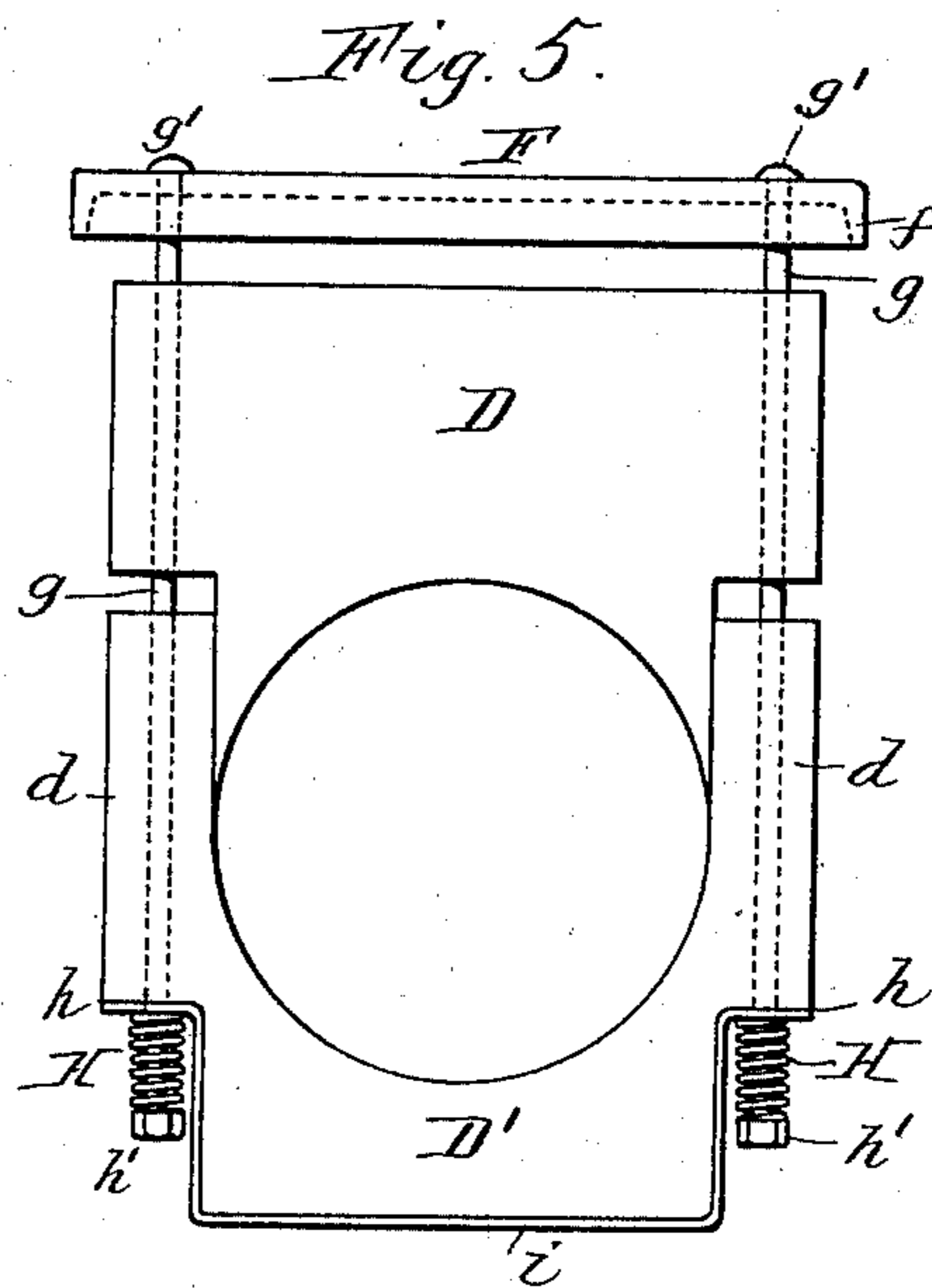
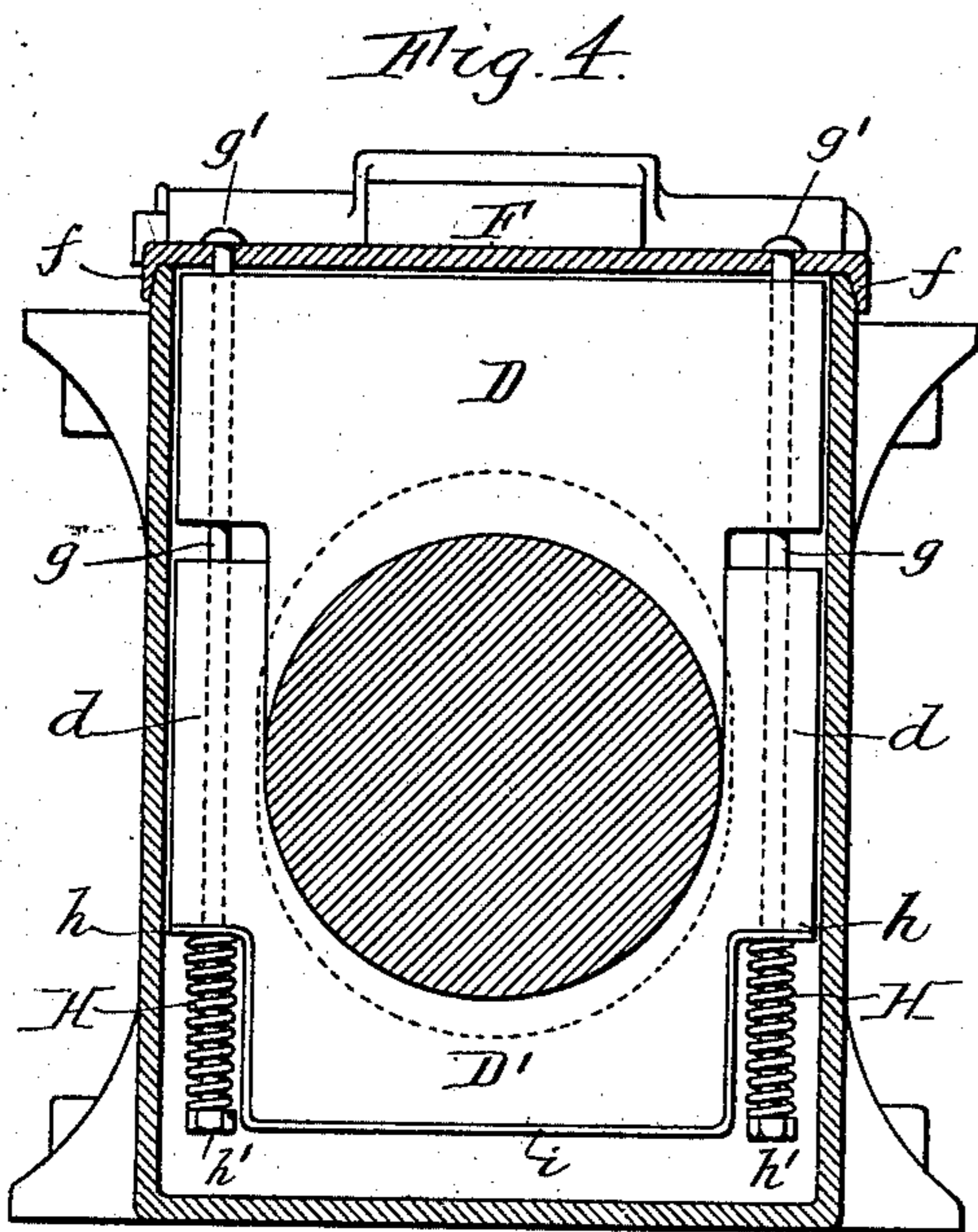
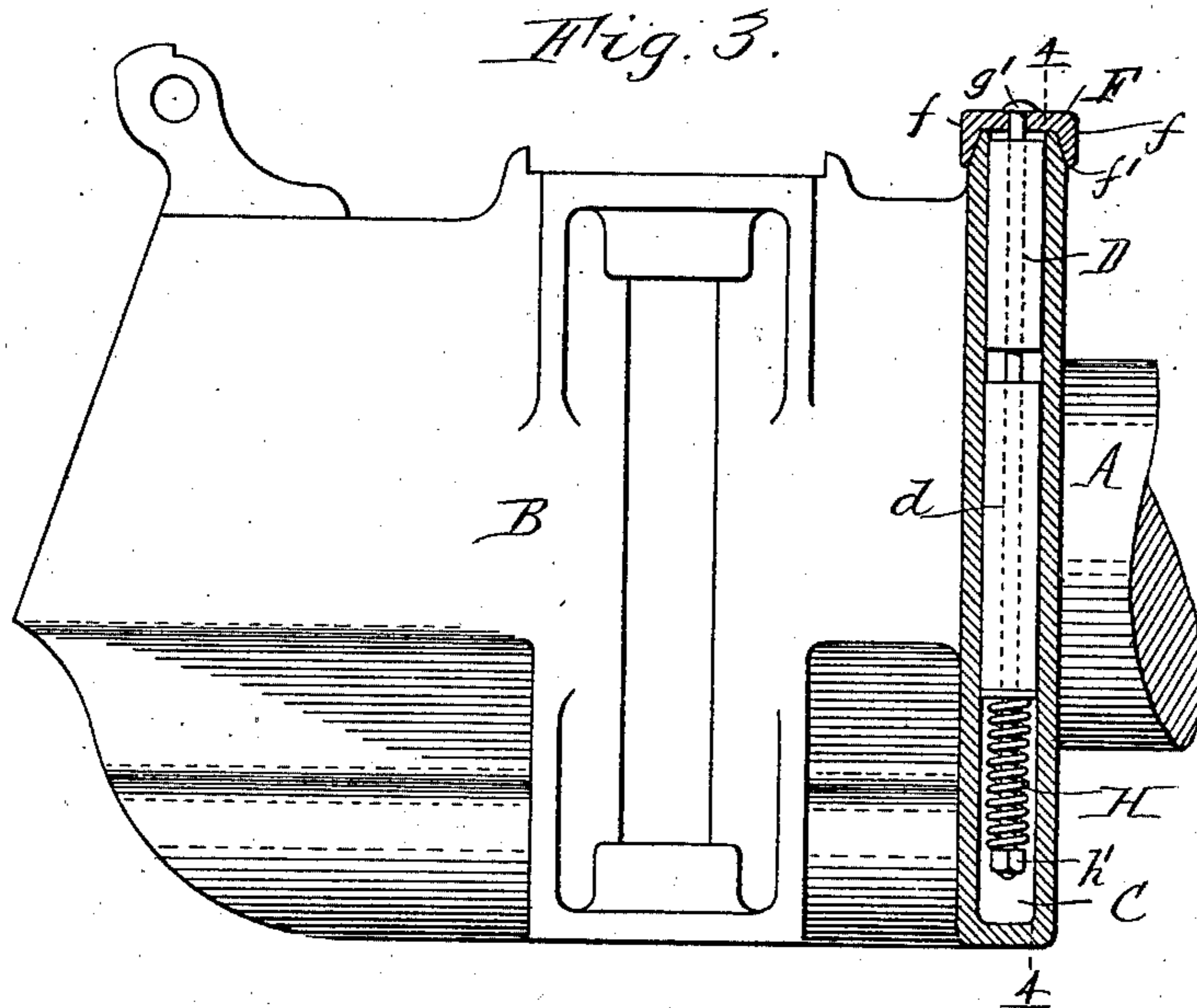
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(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

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## DUST-GUARD FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 670,034, dated March 19, 1901.

Application filed August 14, 1900. Serial No. 26,840. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD F. RICHARDS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Dust-Guards for Journal-Boxes, of which the following is a specification.

This invention relates to the divided or sectional dust-guards which are applied to the rear end of car-axle boxes.

The objects of my invention are to yieldingly support the lower section of the guard by simple devices which are located wholly within the journal-box, so as to be protected against injury and to effectually prevent the entrance of dust at the upper end of the pocket which contains the guard.

In the accompanying drawings, consisting of two sheets, Figure 1 is a longitudinal section of a car-axle box provided with my improved dust-guard. Fig. 2 is a top plan view of the box, showing one-half thereof in section. Fig. 3 is a side elevation of the box, partly in section, the plane of the sectional portion being in line 3 3, Fig. 2. Fig. 4 is a transverse section in line 4 4, Fig. 3. Fig. 5 is a detached face view of the dust-guard, suspension-cap, and rods, showing the position of the parts when the box is "jacked up."

Like letters of reference refer to like parts in the several figures.

A is the journal, which extends into the cavity of the box B through the usual opening *b* in the rear wall of the box.

C is the pocket, which is formed in the rear wall of the box and which is open at its upper end and closed at its lower end.

D D' are the upper and lower sections of the dust-guard, which are arranged in the pocket C and which are recessed in their opposing edges to conform to the upper and lower sides of the journal. The side portions *d* of the lower section preferably extend upwardly to about the upper side of the journal and are provided with vertical inner faces, while the lower portion of the upper section is contracted to fit between the upward extensions *d* of the lower section. The upper section preferably rests loosely upon the journal, so as to rise and fall freely therewith. The lower section is suspended from the top

of the journal-box by a transverse cap or yoke F and vertical rods *g*, extending downwardly from said cap. This cap rests loosely on the upper end of the pocket C, which latter projects above the upper side of the box, and the cap is provided at its four sides with a depending flange *f*, which overlaps the projecting end of the pocket. The upper end of the pocket and the contiguous inner face of the cap-flange *f* are preferably beveled, as shown at *f'* in Figs. 1 and 3, so as to reliably hold the cap in place and form a tight dust-proof joint between the same and the pocket.

The suspension-rods *g* are arranged on opposite sides of the journal and pass through openings formed in the cap F and through vertical openings formed in the side portions of the upper and lower guard-sections, as shown. The upper ends of these rods are provided with heads *g'*, which bear against the upper side of the cap F, and their lower ends extend below the side portions of the lower section, but terminate above the bottom of the box.

H represents springs applied to the projecting lower portions of the suspension-rods and interposed between shoulders *h* of the lower guard-section and screw-nuts or enlargements *h'*, applied to the lower ends of the rods. These springs are partly compressed in the normal position of the dust-guard and tend constantly to press the lower section of the guard against the under side of the journal. The lower guard-section is preferably bound along its lower portion with a metallic strap *i* to prevent splitting of the section, which is usually constructed of wood.

In jacking up the journal-box for removing the usual bearing-brass and its key the cap or yoke F is elevated with the box, as shown in Fig. 5, the suspension-rods *g* sliding upwardly in the openings of the upper and lower guard-sections D D' and the springs H being further compressed.

By my improved construction and arrangement the guide-rods of the guard-sections and the springs of the lower section are arranged wholly within the journal-box, and they are therefore inclosed and protected by the box and not exposed to damage or injury, as is

the case when the rods and springs project above or below the box. This also produces a more sightly construction than one in which the rods and springs are arranged partly outside of the box.

My improvement requires no material change in the construction of the ordinary journal-boxes now generally used, and in case of accident or breakage of the dust-guard the same is interchangeable with ordinary dust-guards.

I claim as my invention—

1. The combination with a journal-box provided at its rear end with a pocket, of a cap mounted on the upper end of said pocket, a dust-guard composed of upper and lower sections applied to opposite sides of the journal and provided in their side portions with vertical openings, vertical guide-rods passing through said cap and the openings of said guard-sections and extending below the side portions of the lower section, but terminating above the bottom of the journal-box, and springs applied to said rods between the lower section and nuts or enlargements arranged at the lower end of the rods, substantially as set forth.

2. The combination with a journal-box provided at its rear end with a pocket which projects above the upper side of the box, of a rectangular cap seated on the upper end of said pocket and provided at its four sides with a depending marginal flange which overlaps said pocket, a dust-guard composed of

upper and lower sections applied to opposite sides of the journal and provided in their side portions with vertical openings, guide-rods passing through said cap and the openings of said guard-sections and extending below the perforated side portions of the lower section, and springs surrounding the lower portions of said rods and interposed between said lower section and nuts or enlargements arranged on said rods, substantially as set forth.

3. The combination with a journal-box provided at its rear end with a pocket which projects above the upper side of the box and which is provided with a beveled or tapered upper end, of a rectangular cap seated on said pocket and having a depending marginal flange provided with a beveled inner face which bears against the beveled upper end of said pocket, a dust-guard composed of upper and lower sections applied to opposite sides of the journal, vertical guide-rods passing through said cap and the side portions of said guard-sections, and springs applied to the projecting lower portions of said rods and bearing against said lower section, substantially as set forth.

Witness my hand this 4th day of August, 1900.

WILLARD F. RICHARDS.

Witnesses:

JNO. J. BONNER,  
CYESTA HORNBECK.