

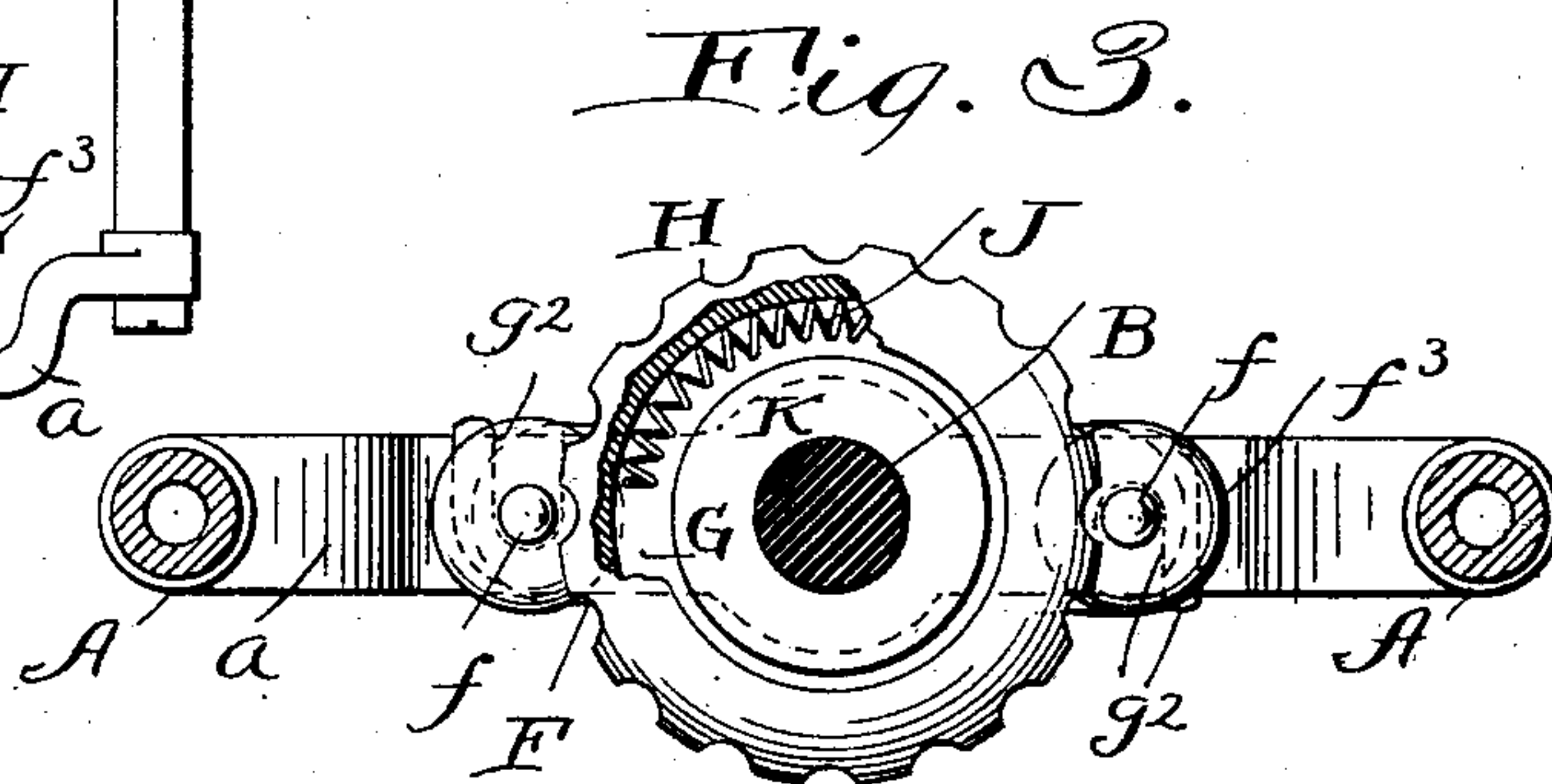
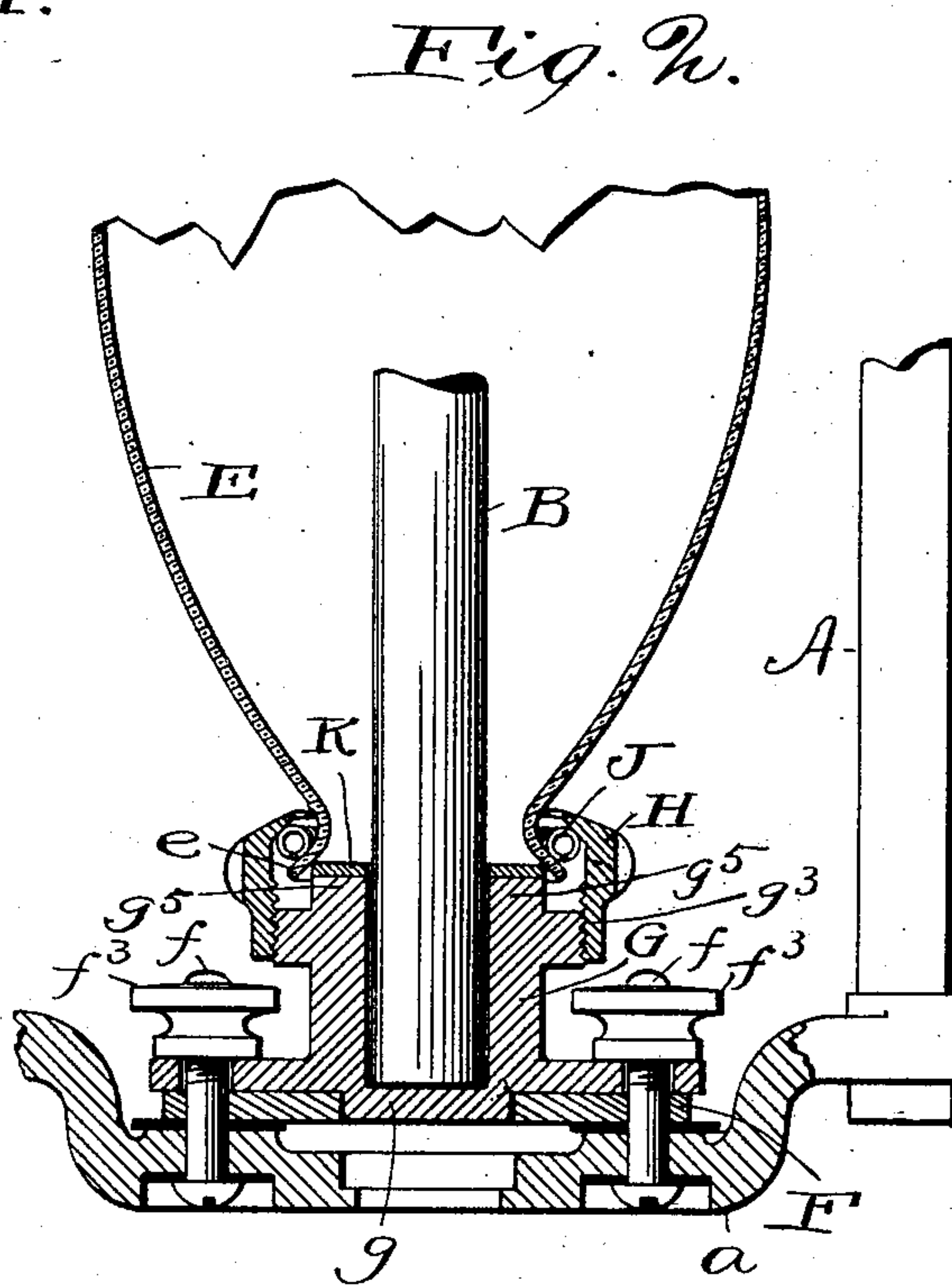
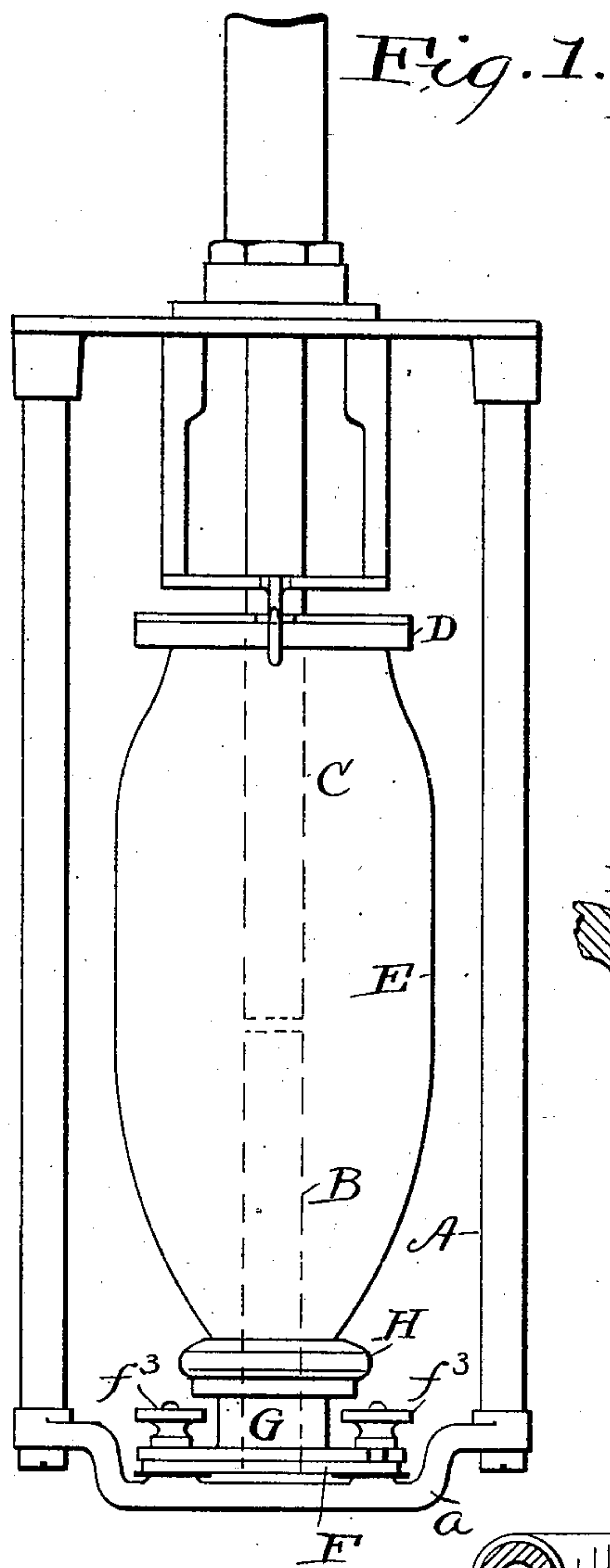
No. 755,855.

PATENTED MAR. 29, 1904.

S. E. DOANE.  
GLOBE HOLDER FOR ARC LAMPS.

APPLICATION FILED JUNE 24, 1903.

NO MODEL.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

SAMUEL EVERETT DOANE, OF CLEVELAND, OHIO, ASSIGNOR TO THE FOSTORIA BULB AND BOTTLE COMPANY, OF FOSTORIA, OHIO, A CORPORATION OF OHIO.

## GLOBE-HOLDER FOR ARC-LAMPS.

SPECIFICATION forming part of Letters Patent No. 755,855, dated March 29, 1904.

Application filed June 24, 1903. Serial No. 162,842. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL EVERETT DOANE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Globe - Holders for Arc-Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a simple and efficient holder for inner globes of inclosed arc-lamps. One of the items of expense in operating such lamp is the breakage of the inner globe. In order to make a tight contact, the globe is usually ground on its extreme end, and it is thus rendered extremely liable to fracture at this point, causing cracks which travel along the glass. I reduce such breakage very materially by means of a holder which is arranged to bear on the side surface of the globe near its end, while leaving the extreme end free. The present invention provides such a holder which is arranged to make the necessary tight contact with the globe to prevent circulation of air therethrough.

The drawings clearly show my invention as applied to the lower end of the globe, for which use it is particularly well adapted.

Figure 1 is a side elevation of the lower portion of an inclosed arc-lamp embodying the invention. Fig. 2 is a vertical section through the holder at the lower end. Fig. 3 is a plan of such holder with the globe removed.

In the embodiment shown in the drawings, A represents the frame of the lamp, B the lower carbon, and C the upper carbon.

D is a head loosely carried by the frame of the lamp and surrounding the upper carbon and adapted to engage and close the upper end of the globe E.

Across the lower portion of the frame of the lamp is a bridge-piece *a*, on which is mounted a suitable plate F. This plate is insulated from the bridge-piece and is connected with one of the conductors. The plate and the bridge-piece have central holes to allow the insertion of the upper carbon. Rising from the plate are a pair of screw-studs *f*.

The holder for the lower carbon and for the

globe is designated G. It is shown as having a boss *g*, taking into the opening in the plate F and having open oppositely-facing slots *g*<sup>2</sup>, adapted to surround the studs *f* and be clamped in place by suitable nuts *f*<sup>3</sup>. The holder G extends upward in the form of an annular head in which seats the lower carbon B, which may be suitably clamped therein. A screw-thread *g*<sup>3</sup> is formed on the outer side of this head, and onto this thread takes the nut H. Within a cavity in the inner surface of this nut is a coiled spring J, which is adapted to be drawn down by the nut upon a flange on the globe.

So much of the construction as has been set out in the above specific description is broadly old; but heretofore in order to make a tight joint the lower end of the flange of the globe has abutted the holder, and the end of the globe being ground a break therein is frequently started at this point. To obviate this, I have provided the construction herein shown and which I will now describe.

Rising centrally at the upper end of the head G is a boss *g*<sup>5</sup>, and on the upper surface of this boss is placed an elastic washer K. Between the outer periphery of the boss and the inner periphery of the nut and above the head and below the spring J is an annular space, and into this space extends the extreme end of the globe E, the globe turning outwardly in the flaring flange *e*. (Shown in Fig. 2.) When the nut H is turned down, the spring J is compressed against the globe-flange, and the latter is pressed snugly against the elastic washer K; but this washer bears simply against the side surface of the globe, where its skin is tough, and the extreme end of the globe is out of contact altogether. The tight joint is thus obtained without danger of fracturing the globe. Moreover, as the extreme end of the globe does not engage anything this end need not be ground, but may be fused, thus making it tougher and saving the expenses of grinding.

Having described my invention, I claim—

1. The combination of a globe flaring outwardly at its end and a separable head engaging the inner surface of such flared part of the globe, and means for forcing the globe into



intimate contact with the head while leaving the extreme end of the globe out of contact, substantially as described.

5 2. In an arc-lamp, the combination of a globe having a flaring end, a holder extending into such flaring end and having an elastic washer surrounding the carbon and engaging the side surface of said flaring end, and means for pressing the globe into intimate contact  
10 with such washer, substantially as described.

3. In an arc-lamp, the combination with a globe having a flaring end, of a holder for the lower carbon and the globe, said holder having a boss surrounding the carbon, a nut  
15 screwing onto the holder, a spring on the inner side of said nut adapted to force the globe toward the boss, there being an annular space between the boss and nut into which the flaring end of the globe freely projects, substan-  
20 tially as described.

4. In an arc-lamp, the combination of a lower-carbon holder, a nut screw-threaded to the outer surface thereof, an annular boss rising from the upper surface of the holder around the carbon and some distance within  
25 the nut, an elastic washer surmounting said boss, the upper end of the nut extending inward, and a coiled spring within the nut adapted to be pressed thereby against a globe-flange and press it against the washer, there  
30 being free space between the boss and nut and between the spring and carbon holder into which the extreme end of said globe may project, substantially as described.

In testimony whereof I hereunto affix my  
signature in the presence of two witnesses.

SAMUEL EVERETT DOANE.

Witnesses:

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