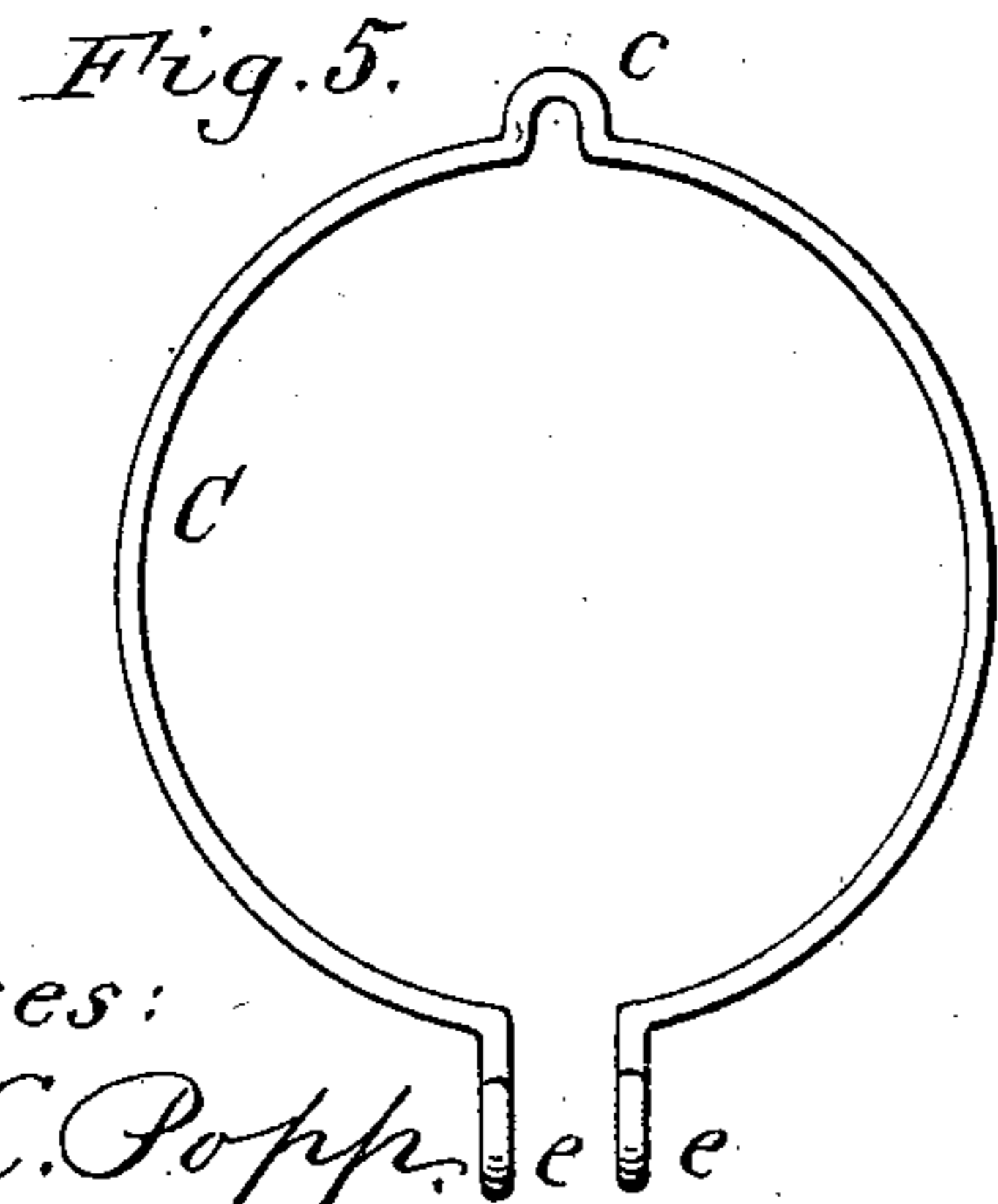
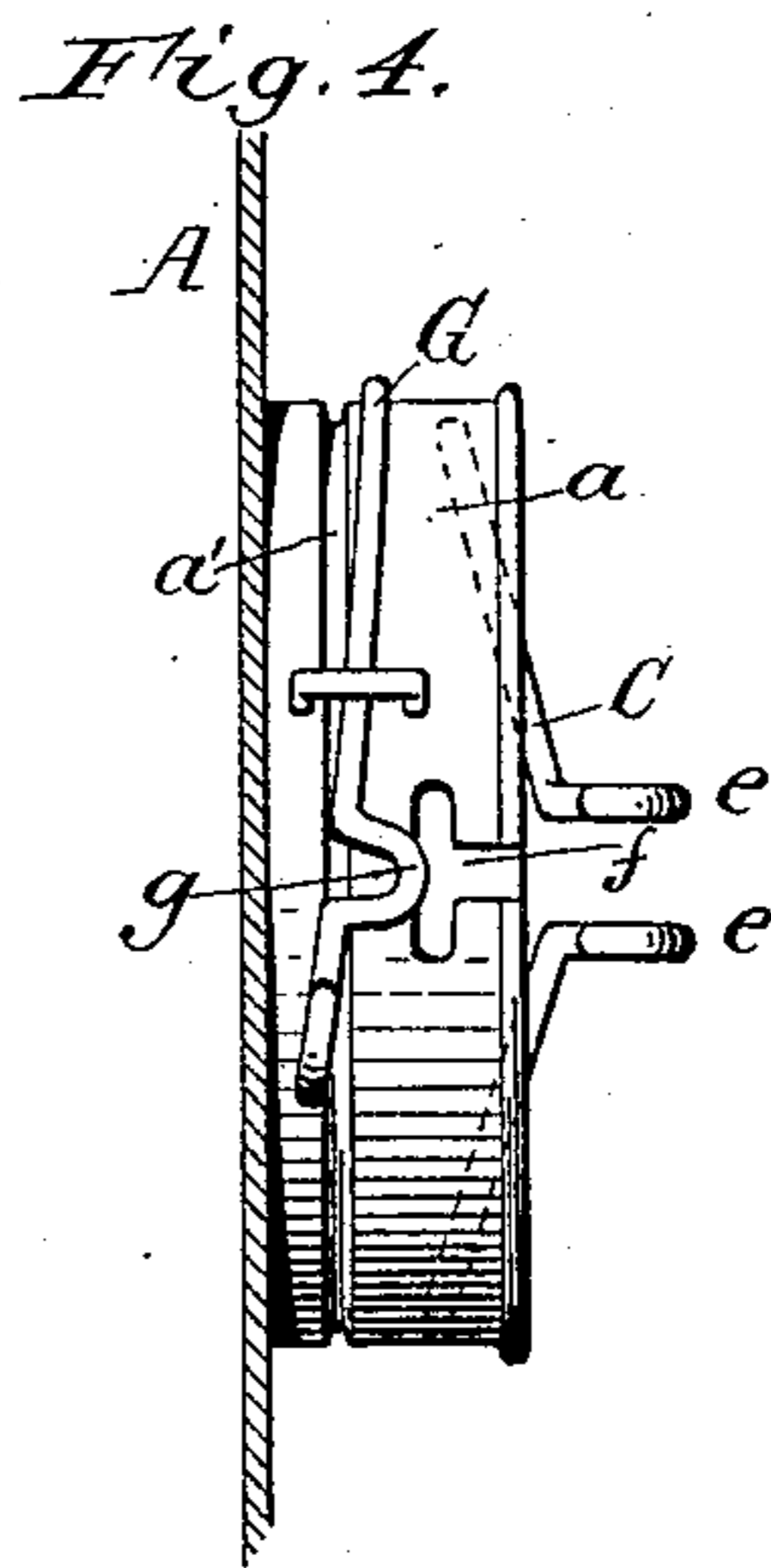
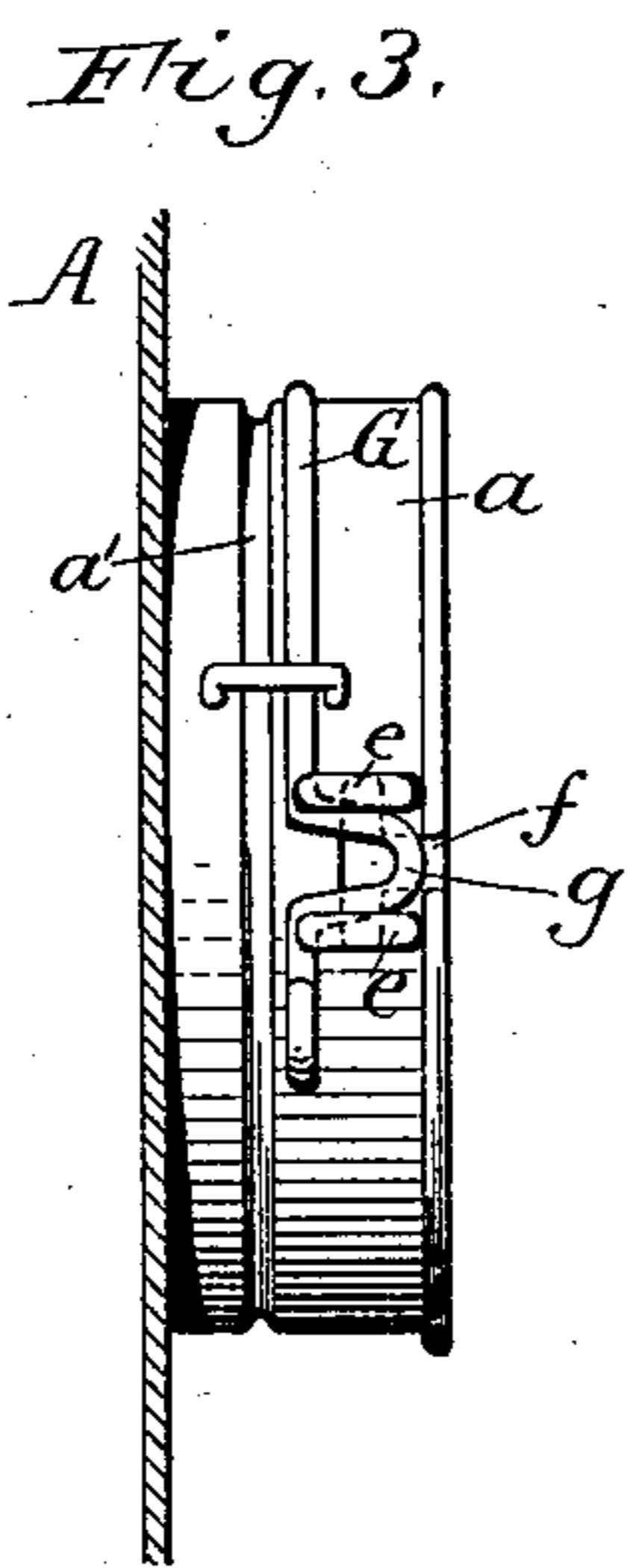
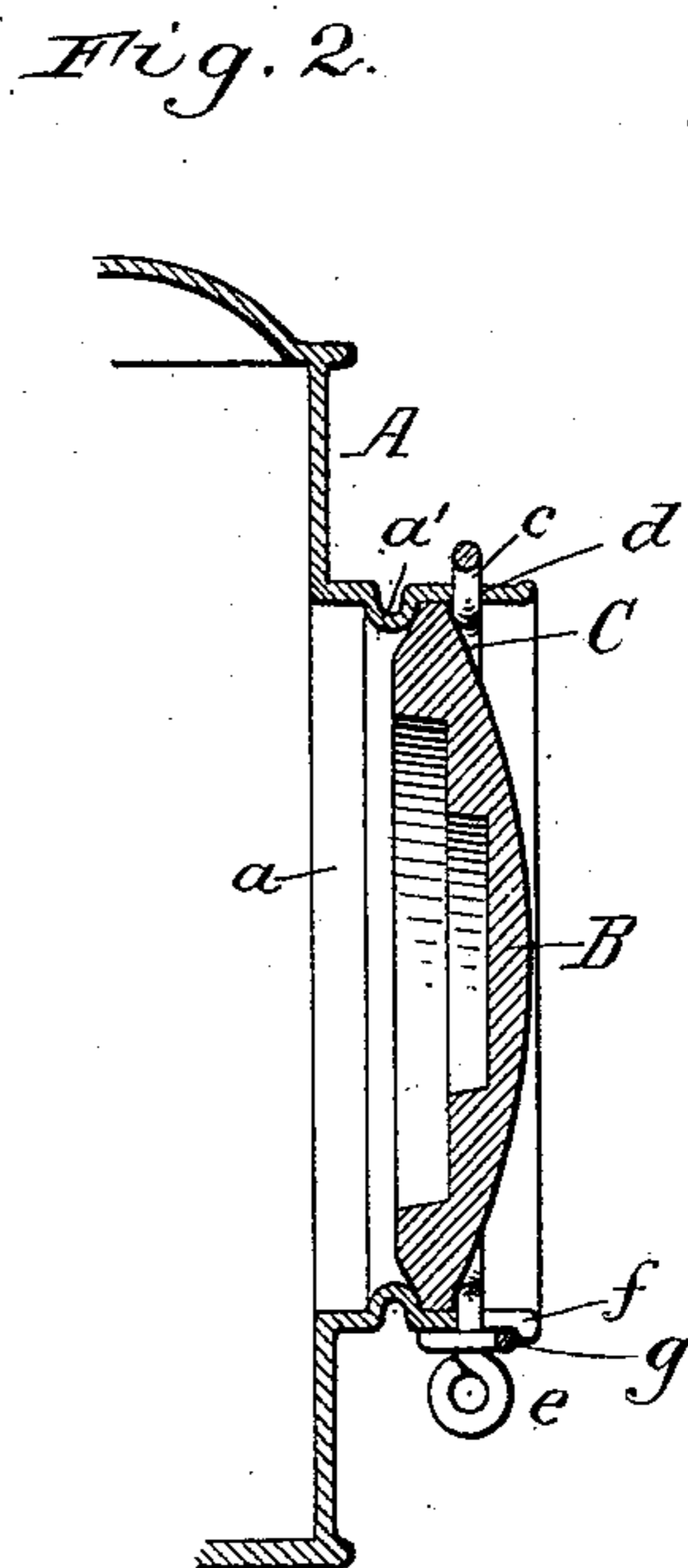
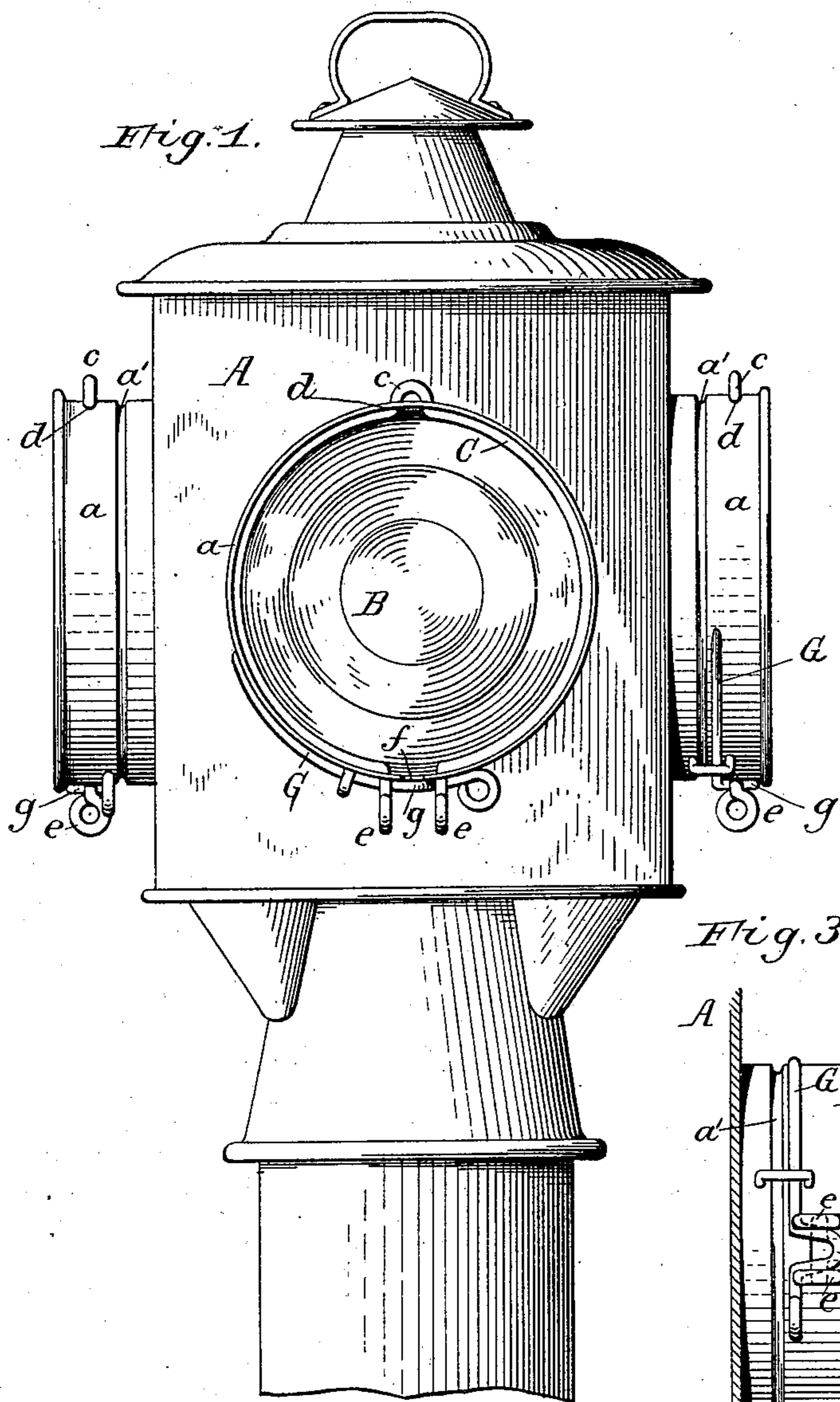


(No Model.)

J. S. GALL.
LENS FASTENING FOR LAMPS.

No. 400,763.

Patented Apr. 2, 1889.



Witnesses:
Theo. L. Popp.
Geo. Buchheit Jr.

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UNITED STATES PATENT OFFICE.

JOHN S. GALL, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE STEAM GAUGE
AND LANTERN COMPANY, OF SAME PLACE.

LENS-FASTENING FOR LAMPS.

SPECIFICATION forming part of Letters Patent No. 400,763, dated April 2, 1889.

Application filed April 2, 1888. Serial No. 269,231. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. GALL, of Rochester, in the county of Monroe and State of New York, have invented new and useful
5 Improvements in Lens-Fastenings for Lamps, of which the following is a specification.

This invention relates to a fastening whereby a lens or glass is detachably secured in a rim or frame which surrounds the lens or
10 glass, so that the latter can be readily removed for cleaning or in case of breakage, and can be quickly replaced and locked in position.

My invention has particular reference to that class of fastenings in which an elastic wire bow or divided ring is employed; and it has for its object to simplify the construction of the fastening, render the manipulation thereof convenient, and to make it secure
20 and reliable.

My invention consists of the improvements which will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is
25 an elevation of a switch-lamp provided with my improved lens-fastening. Fig. 2 is a sectional elevation of one of the lenses and connecting parts. Fig. 3 is a bottom plan of the fastening in the position in which the lens is
30 secured thereby. Fig. 4 is a similar view showing the fastening released. Fig. 5 is a view of the wire bow.

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

35 A represents the body of a switch-lamp provided in its side with circular collars, rims, or frames *a*, in which the lenses *B* are secured, the collars being provided with internal beads or shoulders, *a'*, against the outer
40 sides of which the lenses rest.

C represents elastic bows or divided rings, of wire or other suitable material, which bear against the outer sides of the lenses along the marginal portions thereof and whereby
45 the lenses are secured in their frames. Each bow *C* is provided diametrically opposite its ends with an upwardly or outwardly projecting bend or ear, *c*, which enters an opening, *d*, formed in the surrounding frame *a*. The
50 ends *e e* of the bow project outwardly through the lower portions of the frame *a*, which latter is provided with an undercut notch, *f*, in which the ends *e e* engage. These ends are

preferably provided with circular thumb-pieces for manipulating the bow. The elas- 55
ticity of the bow holds its ends apart; but upon inserting the ear *c* in the opening *d* and compressing the ends *e* the latter can be engaged in the undercut notch *f*, and when
60 so engaged the elasticity of the bow holds the ends under the overhanging portions of the undercut notch *f*, whereby accidental displacement of the bow is prevented. If desired, the ends of the bow may be further se- 65
cured in the undercut notch *f* by a spring-catch, *G*, which is secured at one end to the outer side of the frame *a*, and engages with
its head *g* between the ends *e e*, holding the latter against the ends of the undercut notch, as represented in Fig. 3; but this spring- 70
catch may be omitted. Upon releasing the spring-catch and the wire bow, as represented in Fig. 4, the wire bow can be withdrawn and the lens be removed from its surrounding
75 frame for cleaning or replacing it by a new lens, as circumstances may require.

I claim as my invention—

1. The combination, with the frame provided with an internal shoulder and with an undercut notch, of a lens resting against said 80
shoulder, and an elastic bow bearing against the lens and engaging with its ends in said undercut notch, substantially as set forth.

2. The combination, with the frame provided with an internal shoulder and having 85
on opposite sides an opening, *d*, and an undercut notch, *f*, of a lens, and an elastic bow provided with an ear, *c*, which engages in the opening *d*, and having its ends engaging in said undercut notch *f*, substantially as set 90
forth.

3. The combination, with the frame provided with an internal shoulder and having on opposite sides an opening, *d*, and an under- 95
cut notch, *f*, of a lens, an elastic bow provided with an ear, *c*, which engages in the opening *d*, and having its ends engaging in said undercut notch *f*, and a spring-catch, *G*, secured to the frame and engaging between the ends of the bow, substantially as set forth. 100

Witness my hand this 27th day of March, 1888.

JOHN S. GALL.

Witnesses:

L. F. WARD,
L. S. WARD.