Stephen F. Gates Improvement in oil cups

112029 PATENTED FEB 21 1871

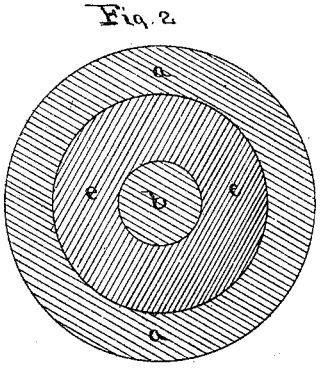

Fig. 2.

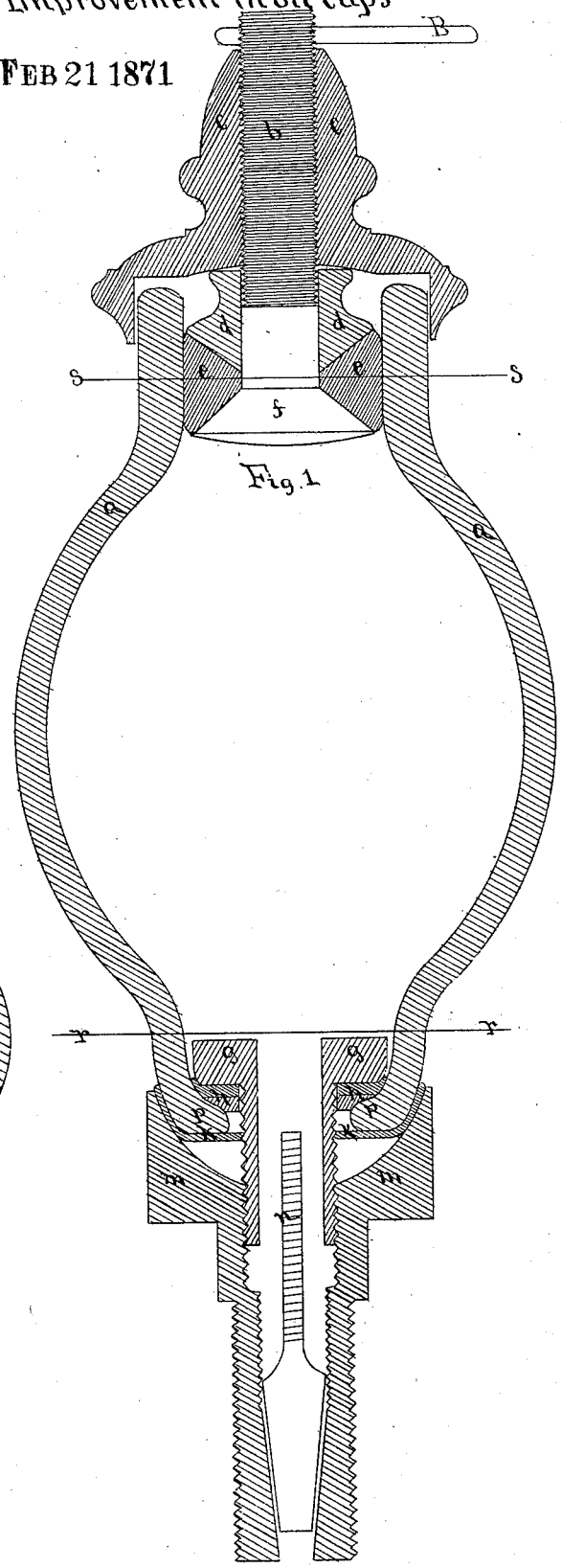

Fig. 1

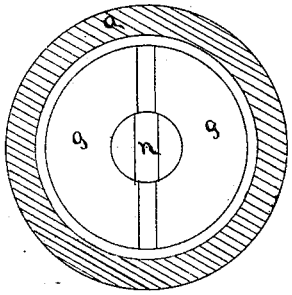

Fig. 3.

Witnesses
John E. Crane
Jon.a J. Hoyt

Inventor
Stephen F. Gates.

UNITED STATES PATENT OFFICE.

STEPHEN F. GATES, OF CAMBRIDGE, ASSIGNOR TO THE LOWELL OIL-CUP COMPANY, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **112,029**, dated February 21, 1871.

To all whom it may concern:

Be it known that I, STEPHEN F. GATES, of Cambridge, in the county of Msddlesex and State of Massachusetts, have invented certain new and useful Improvements in Oil-Cups, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 represents a vertical central section. Figs. 2 and 3 are transverse sections on the lines S S and *r r*, respectively.

This invention relates to oil-cups which are used in connection with the journal-boxes and some other parts of the machinery where the lubricating-oil is contained in a globe or fountain and fed to the rotary or other moving shaft, or other device, by any suitable means.

This invention consists, first, in the combination of the glass globe *a* and the stand *m*, both constructed as shown and described, the latter with a concave recess and a screw-furnished tubular recess below it, and the former with a rounded lower end, conforming to the shape of the recess first named, when the globe and the stand are connected by a collared and screw-furnished bushing, which passes through the neck of the former and is screwed into the lower annular recess in the latter, as clearly shown in the drawing, and as hereinafter described; second, in the mode or means of effectually closing the top or upper neck of the globe.

In constructing my improved oil-cup the glass globe *a* is first blown in a suitable mold, which will give the external form about as shown in the drawing, with the lower end rounded and an aperture through the center, and also an opening at the upper end. I next provide a metal stem or stand, *m*, having its upper end hollow or concave to correspond with the lower rounded end of the globe. This stem and the lower end of the globe are brought near together, a leather or other suitable packing, K, being placed between them. Inside of the lower neck of the globe, and on the top of the lip P, I apply a washer or packing, *h*, and on the top of this packing, and leading through it, a screw-bushing, *g*, the tube of which extends downward and screws into the tubular recess in the upper end of the stem.

g represents the head of the bushing, which is slotted to receive a turn-screw, by which to screw the bushing downward into the stem and draw the parts firmly together. By this means the packings *h* and K are compressed, so that no oil will pass through them, and the glass globe is suitably connected with the stand.

A central passage admits the screw-plug *n*, which forms no part of this invention.

If the maker or user of this improved oil-cup prefers, he may saturate the packings with any well-known substance which will resist the action or penetration of the oil.

At the upper end or neck of the oil-cup I apply a cork or other compressible stopper, *e*, having a bolt, *b*, passing through its center, and a loose follower, *d*, applied to the shank of the bolt. The lower end of the follower is convex or conical, and the bolt-head *f* is of the same or a similar form, as clearly shown in the drawing. Above the follower *d* is a screw-cap, *c*, which screws onto the bolt, and serves also for a nut to press the follower and the bolt-head together or toward each other, thus compressing the cork or other stopple *e* vertically, and expanding or crowding its sides outward against the inner surface of the upper neck of the globe, and this outward pressure is increased in proportion to the force exerted on the screw-cap *c* to draw the bolt-head *f* and the follower *d* toward each other.

To prevent the cork turning with the screw-cap *c* a hole is made in the top of the bolt, B, and a pin or holding-lever, B, inserted therein.

The yielding property of the packings *h* and K so cushions the glass between the rounded neck and the lip P as to prevent the glass becoming fractured either by the jar of machinery or otherwise, and the soft or yielding packing *e* at the top of the globe has little tendency to fracture or injure the glass.

The stopple *e* is removed for filling the globe by unscrewing the cap *c*, which releases the lateral pressure, and the stopple is easily drawn out endwise.

I claim as my invention—

1. The combination of the glass globe *a* and

the stand *m*, both constructed as shown and described, the latter with a concave recess and a screw-furnished tubular recess below it, and the former with a rounded lower end conforming to the shape of the recess first named, when the globe and the stand are connected by a collared and screw-furnished bushing, in the manner and for the purpose set forth.

2. The combination, substantially as described, of the bolt *b*, having a conical head, *f*, the conical follower *d*, the compressible packing *e*, and screw-cap *c*, each constructed, as shown and described, and all operating in the manner and for the purpose specified.

STEPHEN F. GATES.

Witnesses:

JOHN E. CRANE,

JONA. J. HOYT.