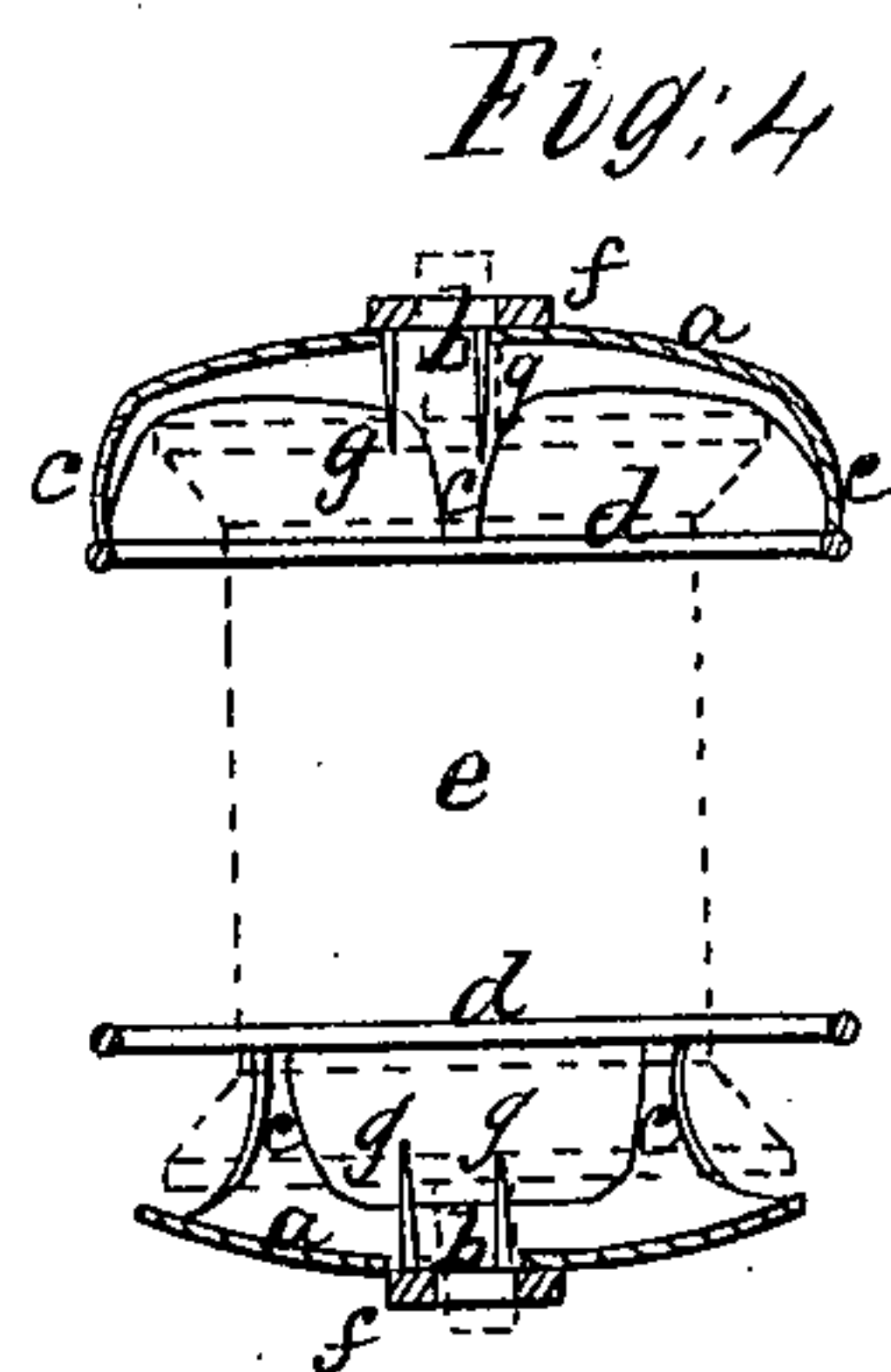
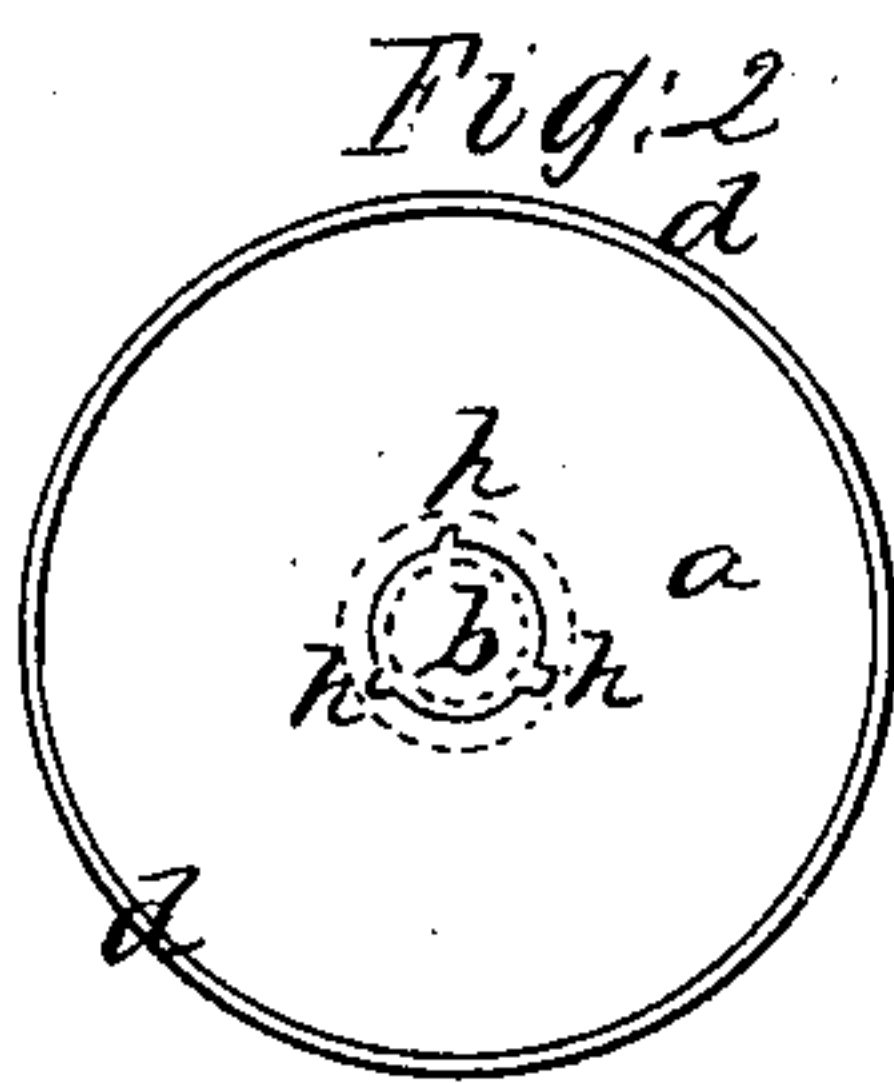
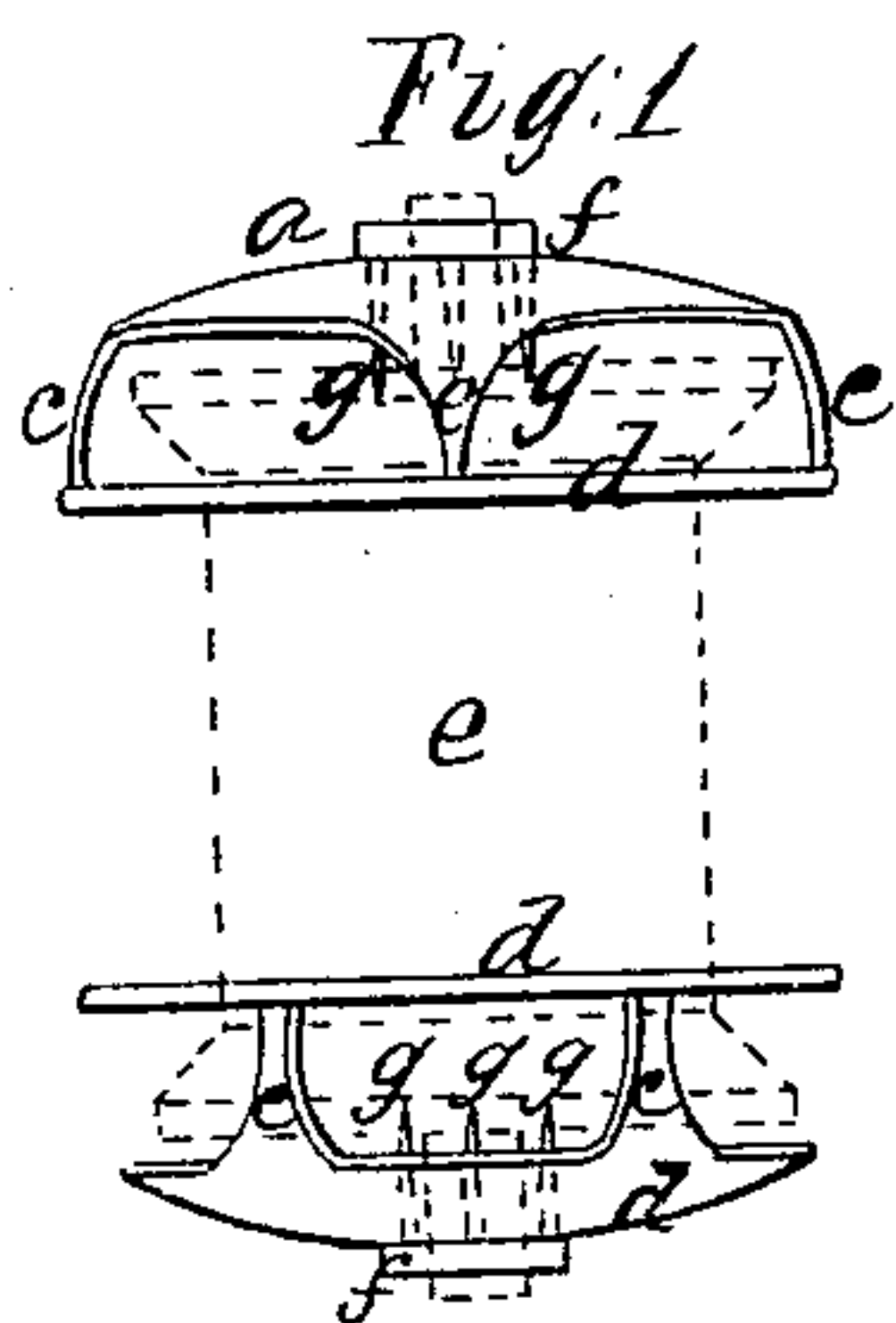


T. O. L. Schrader.

Spool and Thread Protector.

N^o 95,842.

Patented Oct. 12, 1869.



Witnesses
Chas. Mercey
H. Hogan

Inventor

T. O. L. Schrader

United States Patent Office.

THEODORE O. L. SCHRADER, OF NEW YORK, N. Y.

Letters Patent No. 95,842, dated October 12, 1869.

IMPROVEMENT IN SPOOL AND THREAD-PROTECTORS.

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, THEODORE O. L. SCHRADER, of New York, in the county of New York, and State of New York, have invented a new and useful Improvement in Spool-Thread Protectors; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a side elevation of my improved spool-thread protector.

Figure 2 is a top view of the same.

Figure 3 is a detached view of its fastening, and

Figure 4, a vertical central section of fig. 1.

Like letters of reference indicate like parts in the several figures.

The nature of my invention consists in the construction of a spool-thread protector, with convex heads, provided with projecting arms, which hold a protecting ring or rim, the device being fastened to the ends of the spool by means of points, either formed on the heads or separately from them, as hereinafter described.

a, in the drawings, represents a convex head, having a circular opening, *b*, in its centre, and being provided with several projections or arms *c*, which support a ring or rim, *d*.

This ring or rim is larger in periphery than the head *a*, and when the latter is secured on a spool, *e*, the ring *d* extends beyond the head of the spool, over its straight part.

f is a ring, formed of any suitable material, its outer periphery being larger and its inner periphery smaller than the opening *b* in head *a*.

This ring *f* is provided with sharp points *g*, which, passing through holes *h*, formed on the edge of opening *b*, enter into the head of the spool. Instead of forming the points *g* on the ring, they may be formed on or fastened to the head *a* of the protector, near the edge of opening *b*.

In applying this protector, a head, *a*, is passed over each head of the spool, the journal *i* of which passes

through the openings *b*. The ring *f* is then passed over the journal *i*, and the points *g*, passing through holes *h*, enter the heads of the spool, until the ring *f* holds the heads *a* of the protector firmly on the heads of the spool.

The thread, while unwinding from the spool near its heads, is held toward the centre by means of the rings *d*, and is thus prevented from slipping over the heads of the spool.

The advantage of my improved protector is its simplicity and cheapness of construction, for the head *a*, with its opening *b*, holes *h*, and arms or projections *c*, can be struck up by a die at a blow, then attached to the ring *d*, and be provided with the points *g*.

The spool is slipped over a spindle, and may be secured by the latter in any desired place or position, so that the spool rotates freely on the spindle, or with the spindle, in the bearings of the latter.

The head *a* with its arms *c* protects the head of the spool from damage, while the rims *d* keep the thread from passing over the heads of the spool.

To remove an empty spool and replace it by a full one, it is only necessary to take the ring *f*, with its points *g*, from the heads of the empty spool, and replace it with the head *a* on the full one.

Having thus described my invention,

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

1. The combination, in a spool-thread protector, of the rim or ring *d* with the convex head *a*, and arms or projections *c*, substantially as and for the purposes set forth.

2. In combination with the above, the ring *f*, provided with points *g*, substantially as and for the purposes set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

THEO. O. L. SCHRADER.

Witnesses:

CHARLES E. FOSTER,
JOHN BULKLEY.