

JAMES H. LUTHER.

Improvement in Swivels for Rock and Well Boring-Machines.

No. 127,177.

Patented May 28, 1872.

Fig. 1.

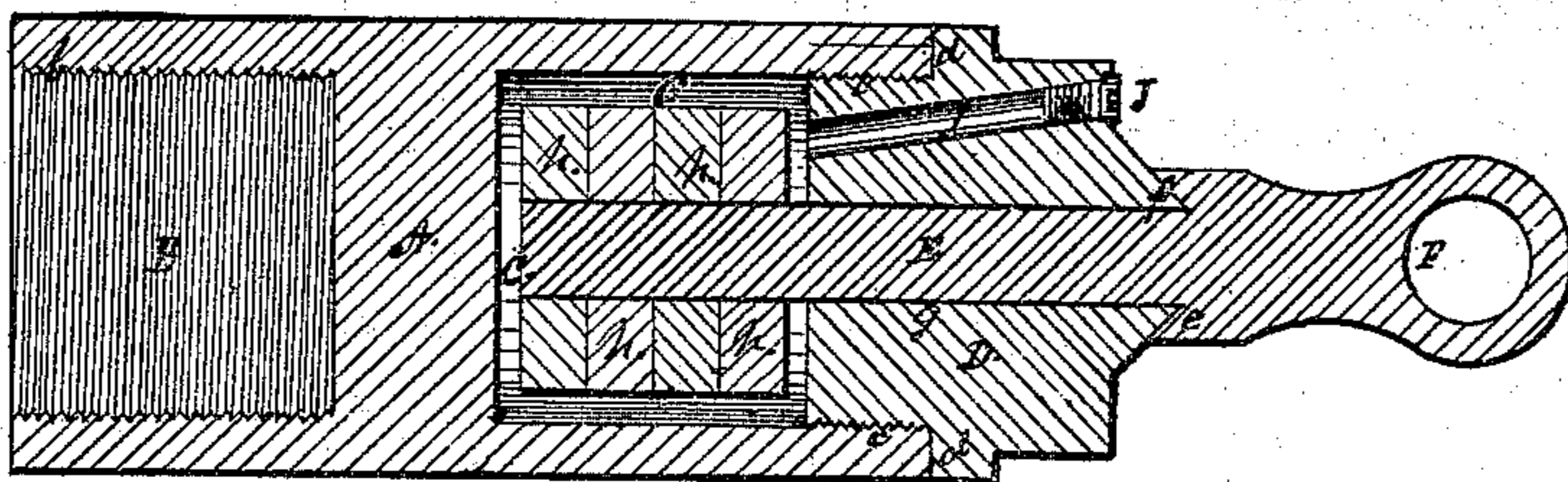


Fig. 2.

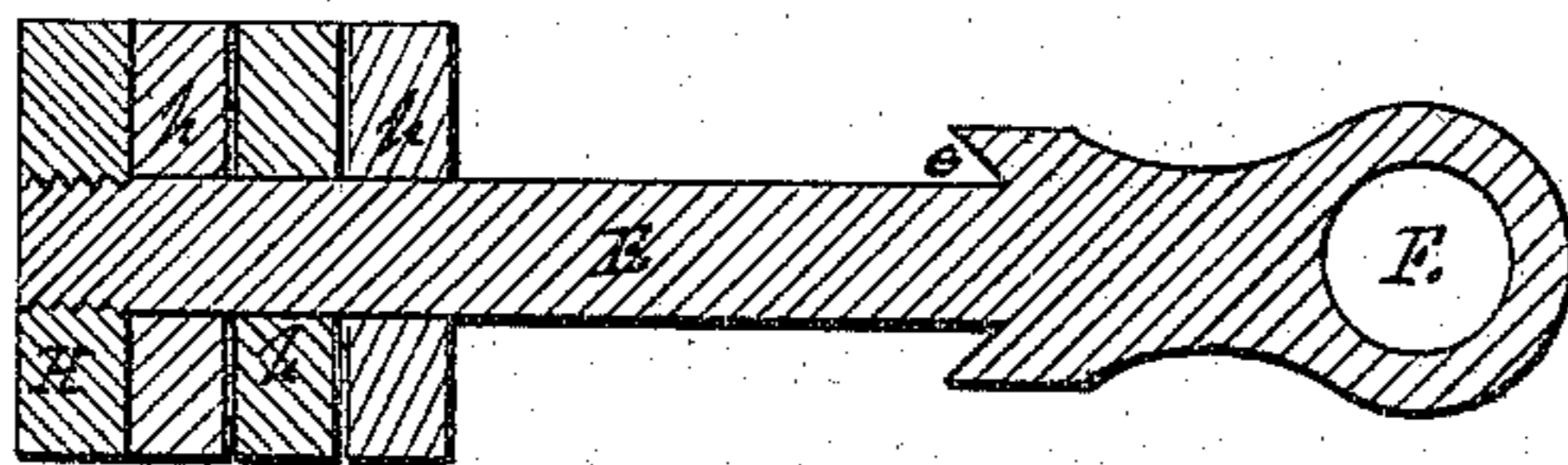


Fig. 3.

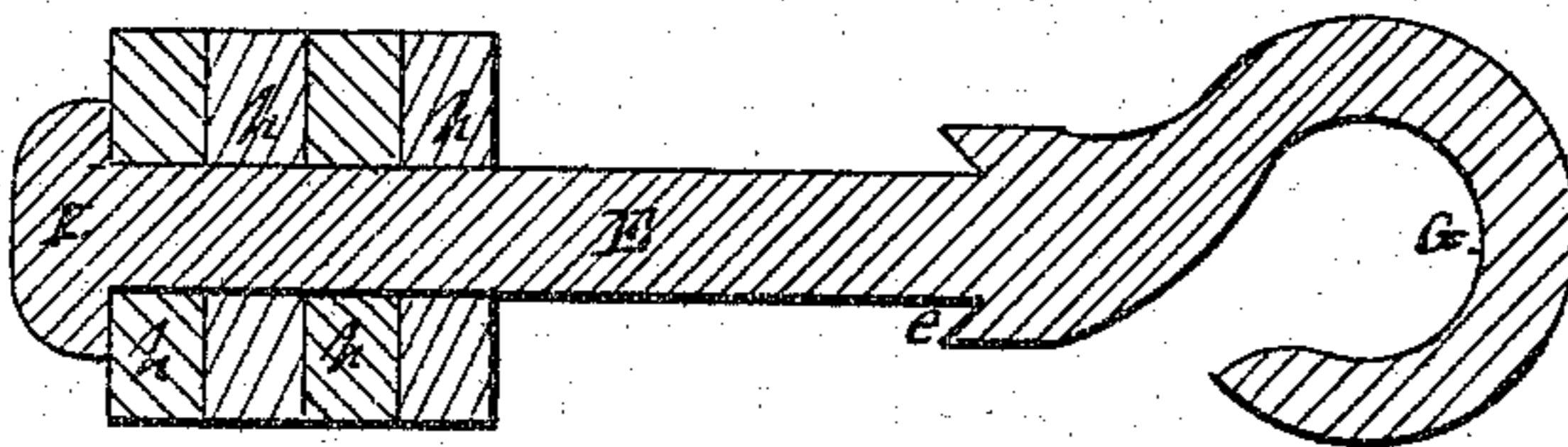
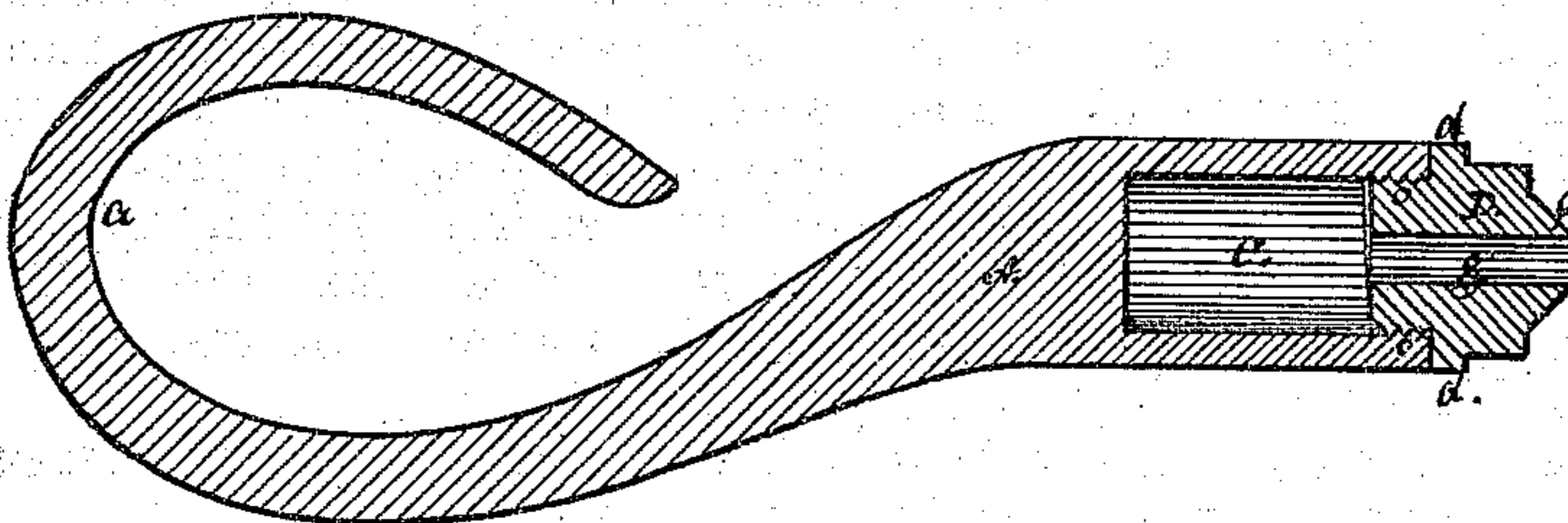


Fig. 4.



WITNESSES,

A. Poole.
E. W. Woodruff.

INVENTOR,

James H. Luther
By J. B. Woodruff Attorney

UNITED STATES PATENT OFFICE.

JAMES H. LUTHER, OF PETROLEUM CENTRE, PENNSYLVANIA.

IMPROVEMENT IN SWIVELS FOR ROCK AND WELL BORING MACHINES.

Specification forming part of Letters Patent No. 127,177, dated May 28, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, JAMES H. LUTHER, of Petroleum Centre, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Swivels for various purposes, such as boring artesian wells, drilling and tunneling machines, &c., which will retain the lubricating material; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a sectional view of the stock or body of the swivel, showing the recess in one of the ends provided with a screw-thread, in which any required tool or fixture may be attached, the other end showing the recess for receiving and retaining the lubricator, the series of ring-collars on the stem of the ring or hook for attaching it for use, and the screw-plug or cap for holding the stem and collars in place, and the hole and stopper for lubricating. Fig. 2 shows a detached view of the ring-stem and hardened ring-collars and screw-nut to hold them on the stem or shaft. Fig. 3 is a view of a hook-stem, showing a head made on the inner end to hold the series of rings or washers. Fig. 4 shows a sectional view, the swivel with a hook made as a part of it, the socket for receiving and retaining the lubricator in the upper end.

The object and nature of my invention are an anti-friction, self-retaining, lubricating swivel, which will not admit sand and gravel to work in to wear the joint and prevent it from turning; and it consists in the construction and arrangement of the parts, as will be hereafter more fully described.

Referring to the drawing and the letters marked thereon, A is the main body or stock to which the various tools and fixtures are attached, either by having a socket, B, provided with a female-screw thread, *b*, into which a corresponding male screw is fitted; or an outside or male screw, onto which a corresponding socket is fitted; or, for some purposes, they may be made with an eye or a hook, *a*, as seen in Fig. 4. In the upper end of the stock A is a recess, C, of sufficient

depth to form a chamber for the lubricating oil, into which outer end is fitted a plug, D, secured by having a male screw, *c c*, and shoulder *d*, and a corresponding female-screw; or the order may be reversed, and the plug D form a cap to screw on over the stock A. Through the cap or plug D is the hole *g* for the shaft or stem E, which is made with a conical cup, *e*, surrounding the stem, it projecting over the rising cone *f*, formed on the cap or plug D, so as to prevent any dirt or gritty substance from working in around the stem E to chafe and prevent it from turning easily. The extended portion of the stem may be formed into a ring or an eye, F, or a hook, G, as seen in Figs. 2 and 3. The stem or shank E, which extends down to the bottom of the reservoir C, is provided with a series of case-hardened or steel rings, or thick washers, *h h h*, fitted loosely, the end one, H, being secured by a screw-thread or a bolt-head, I, as seen in Fig. 3. The chamber C is supplied with the lubricator through the channel *j* in the plug D, and closed by the screw-plug J.

The advantages to be derived from constructing swivels in the manner above described are that they will last five times longer than those constructed in the usual way, and never fail to operate.

What I claim is—

1. The reservoir C for the reception and retention of the lubricating material, in combination with the hardened metal rings *h h h* and stem E for the purpose of making anti-friction swivel-joints, substantially in the manner herein shown and described.

2. I claim the inverted conical cup *e* on and surrounding the stem E, fitting the cone *f* on the cap or plug D to prevent dirt or gritty substances from getting into the joint of the swivel to wear and prevent it working, substantially as and for the purposes herein set forth.

In testimony whereof I hereunto subscribe my name.

JAMES H. LUTHER.

Witnesses:

J. B. WOODRUFF,
FRED. A. GEE.