

N. D. DAVIS.

COUPLING FOR CHAIN-PUMP BUCKETS.

No. 170,824.

Patented Dec. 7, 1875.

FIG. I

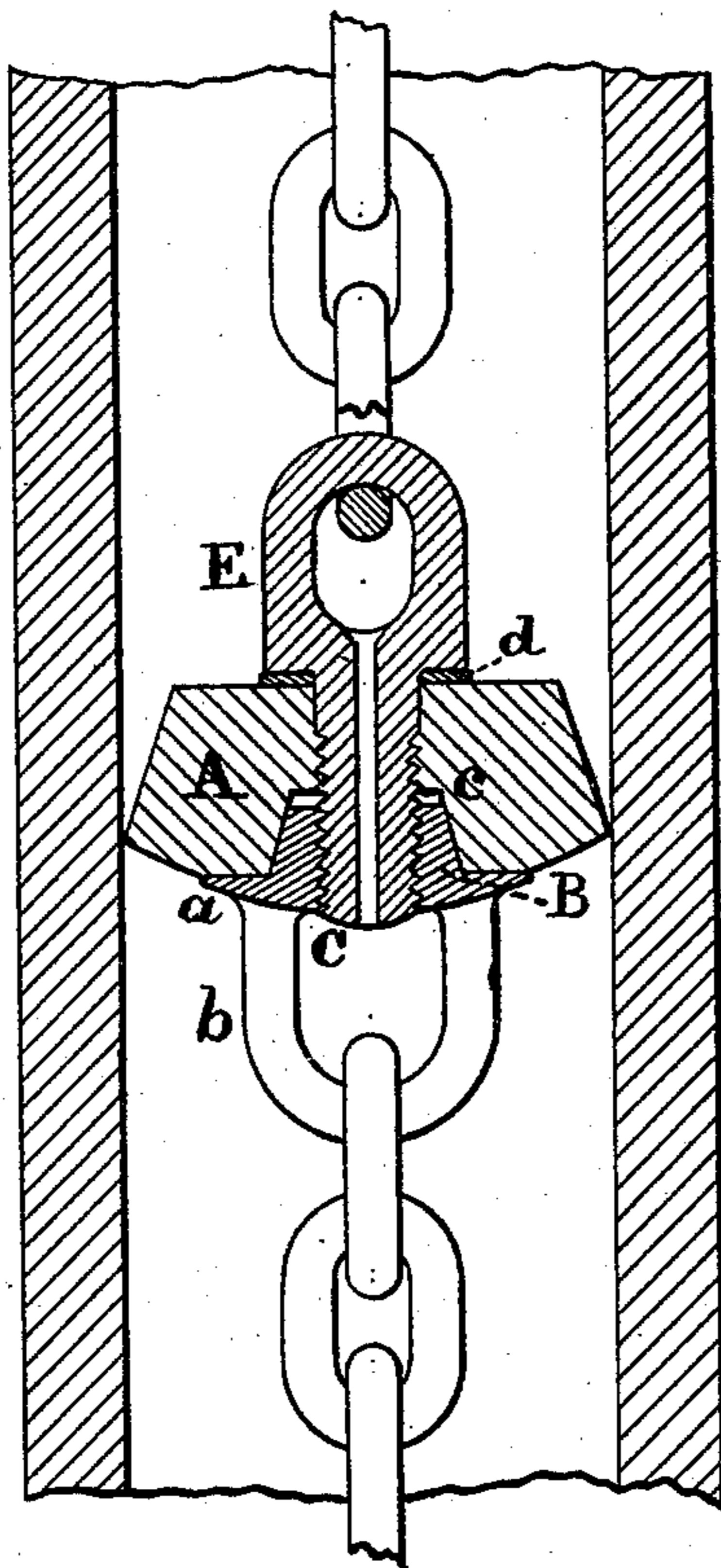
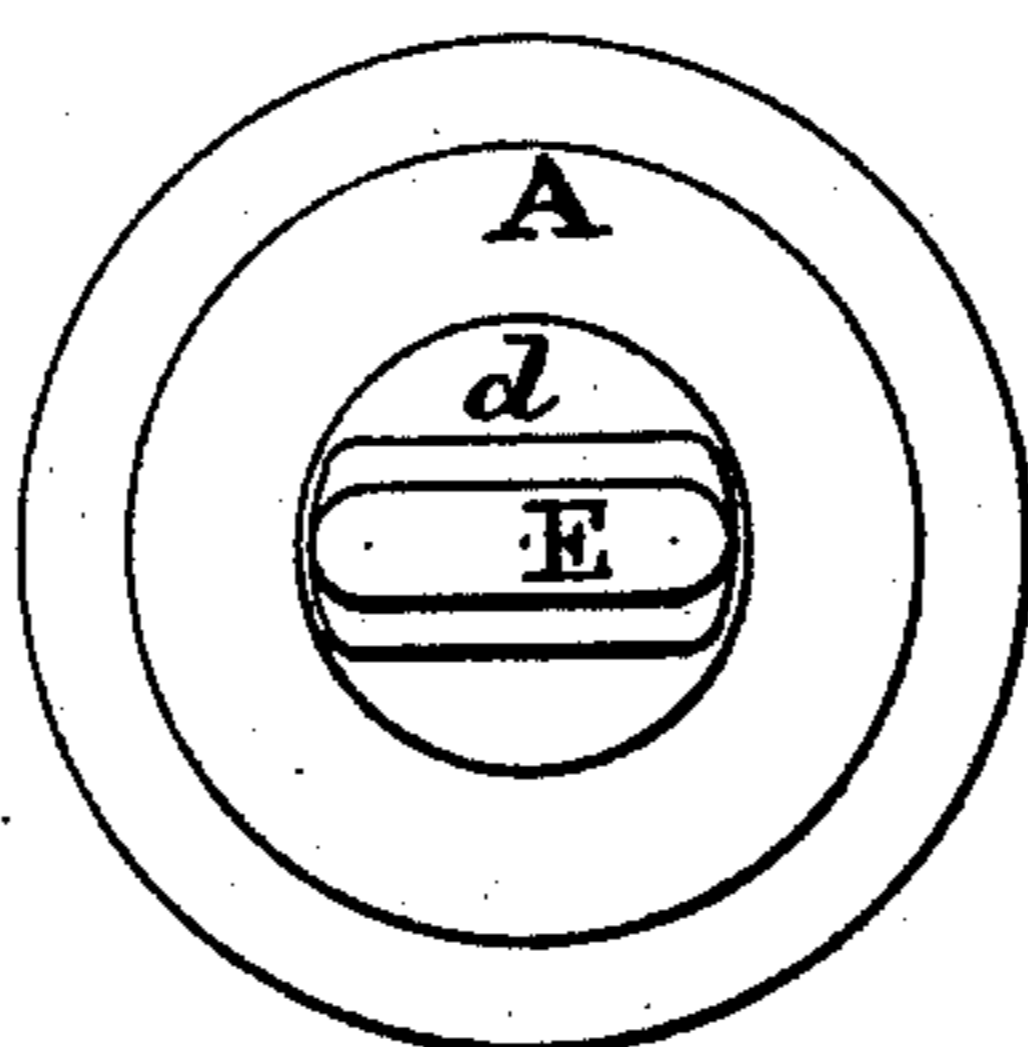


FIG. II



WITNESSES.

H. A. Daniels

Theodore Mungen

INVENTOR.

Nelson D. Davis,
by L. H. M. J. Howard
Attys.

UNITED STATES PATENT OFFICE.

NELSON D. DAVIS, OF CATON, NEW YORK.

IMPROVEMENT IN COUPLINGS FOR CHAIN-PUMP BUCKETS.

Specification forming part of Letters Patent No. **170,824**, dated December 7, 1875; application filed October 12, 1875.

To all whom it may concern:

Be it known that I, NELSON D. DAVIS, of Caton, Steuben county, New York, have invented certain Improvements in Couplings for Chain-Pump Buckets, of which the following is a specification, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

In the drawing referred to, Figure 1 is a vertical section of the invention applied to a section of the pump-tube. Fig. 2 is a top view of the pump-bucket.

A represents a bucket of rubber, leather, or other suitable material, the large diameter of the bucket fitting the tubing, as shown. B is a tapering nut of square cross-section, having at its bottom the flange *a*, from which extends the lower link *b*. The nut fits into the tapering cavity *c* in the bucket, and receives the screw C, which carries the upper link E. Between the bottom or flat portion of the said link and the top of the bucket is a washer, *d*. The screw C is perforated its entire length, as shown. The tapering nut B extending into the bucket strengthens it, and, when drawn up by the screw C, helps to expand the bucket when worn. The bucket A being solid, and stiffly held at the part above the cavity *c* under the washer *d*, it will be seen that the entrance of the tapering nut, induced by the turning of the link-screw, tends to spread the bucket, the top of the cavity being the point at which the flexibility of the bucket in this regard begins. The cavity is made somewhat

deeper than the tapering nut, to allow of its action, as aforesaid. The hollow screw admits air to the tubing and clears it of water.

The intervention of a part of the flexible bucket between the metallic connections, prevents the jar, which otherwise would be incident to the action of the pump, while it renders the operation of the spreading-nut efficient, as aforesaid.

I claim as my invention and wish to secure by Letters Patent of the United States—

1. The elastic bucket A, having the tapering cavity *c* and solid intermediate portion perforated by the link-screw, as shown, combined with the said link-screw C, washer *d*, and tapering nut B, of less depth than said cavity, whereby elasticity is obtained between the bucket and its metal connections, and the bucket rendered capable of expansion, substantially as herein specified.

2. The tubular link-screw C, combined with the elastic bucket A and lower link-nut B, whereby a central elastic connection and means for admitting air to, and draining water from, the tubing are obtained, as and for the purposes herein specified.

In testimony whereof I have subscribed my name hereto this 5th day of August, A. D. 1875.

NELSON D. DAVIS.

Witnesses:

ALGIE DE WATERS,
JULIAN BABCOCK.