

W. COOPER.  
Chain-Pumps

No. 127,576

Patented June 4, 1872.

Fig 1

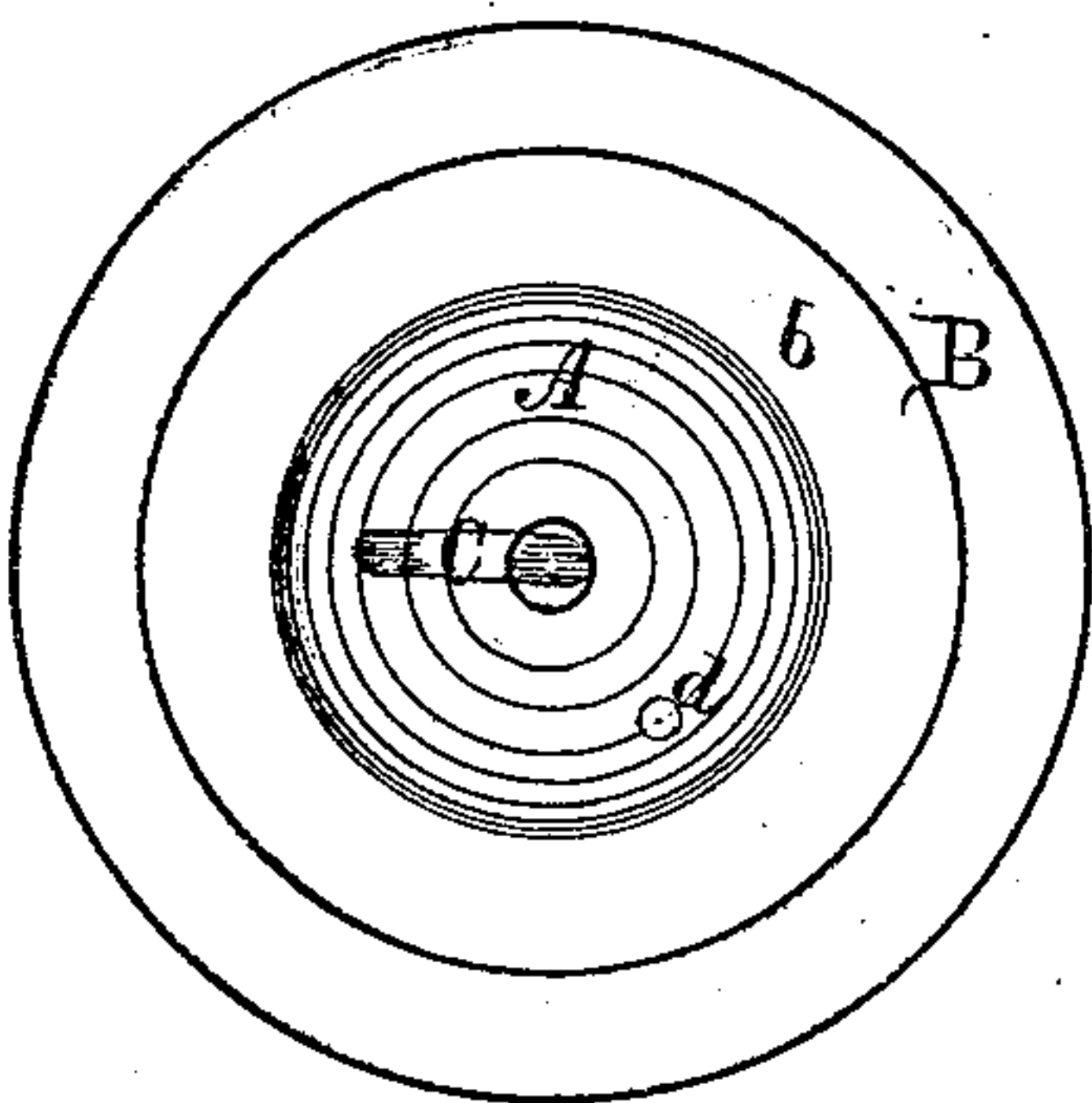


Fig 2

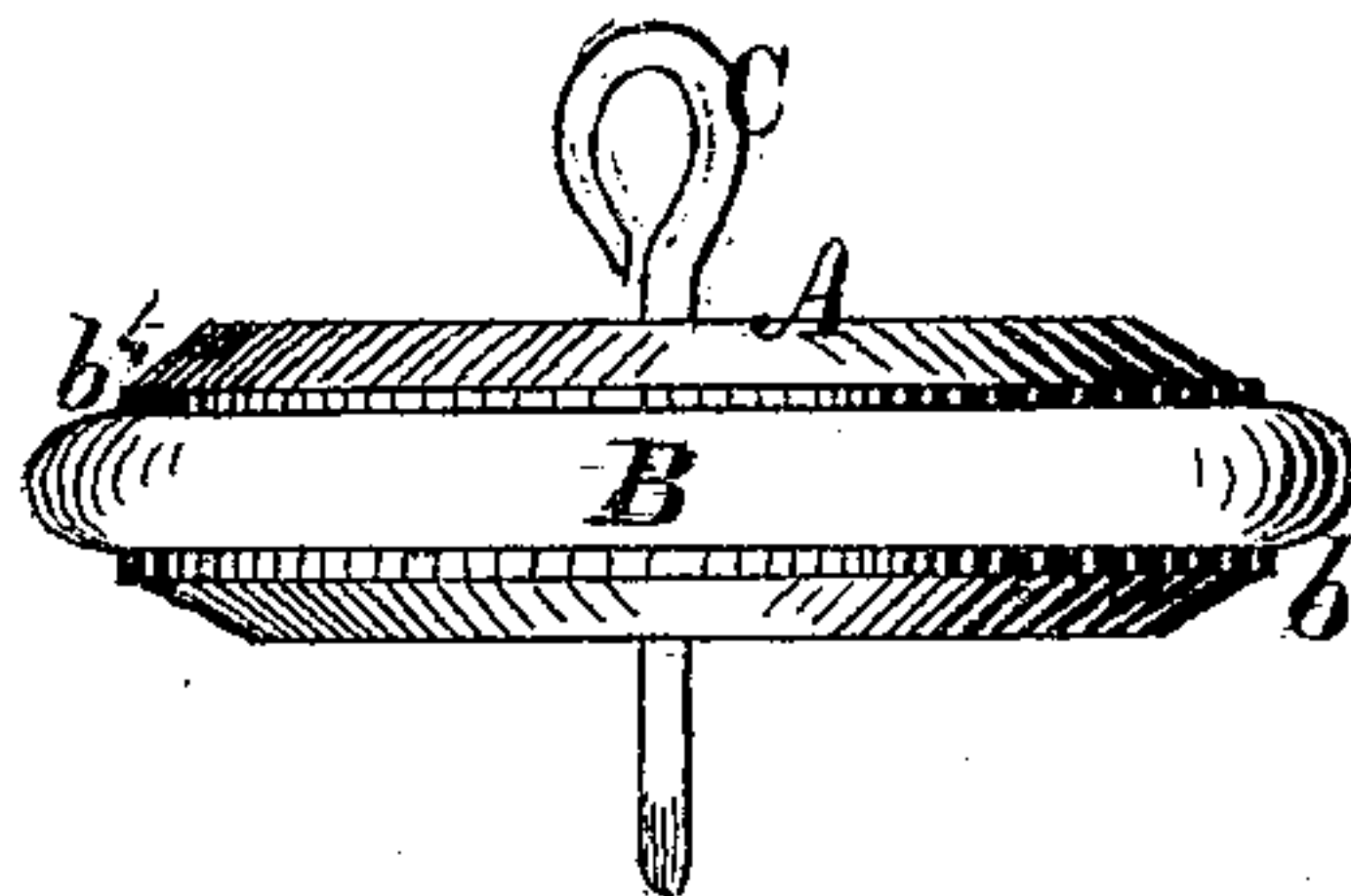


Fig 3

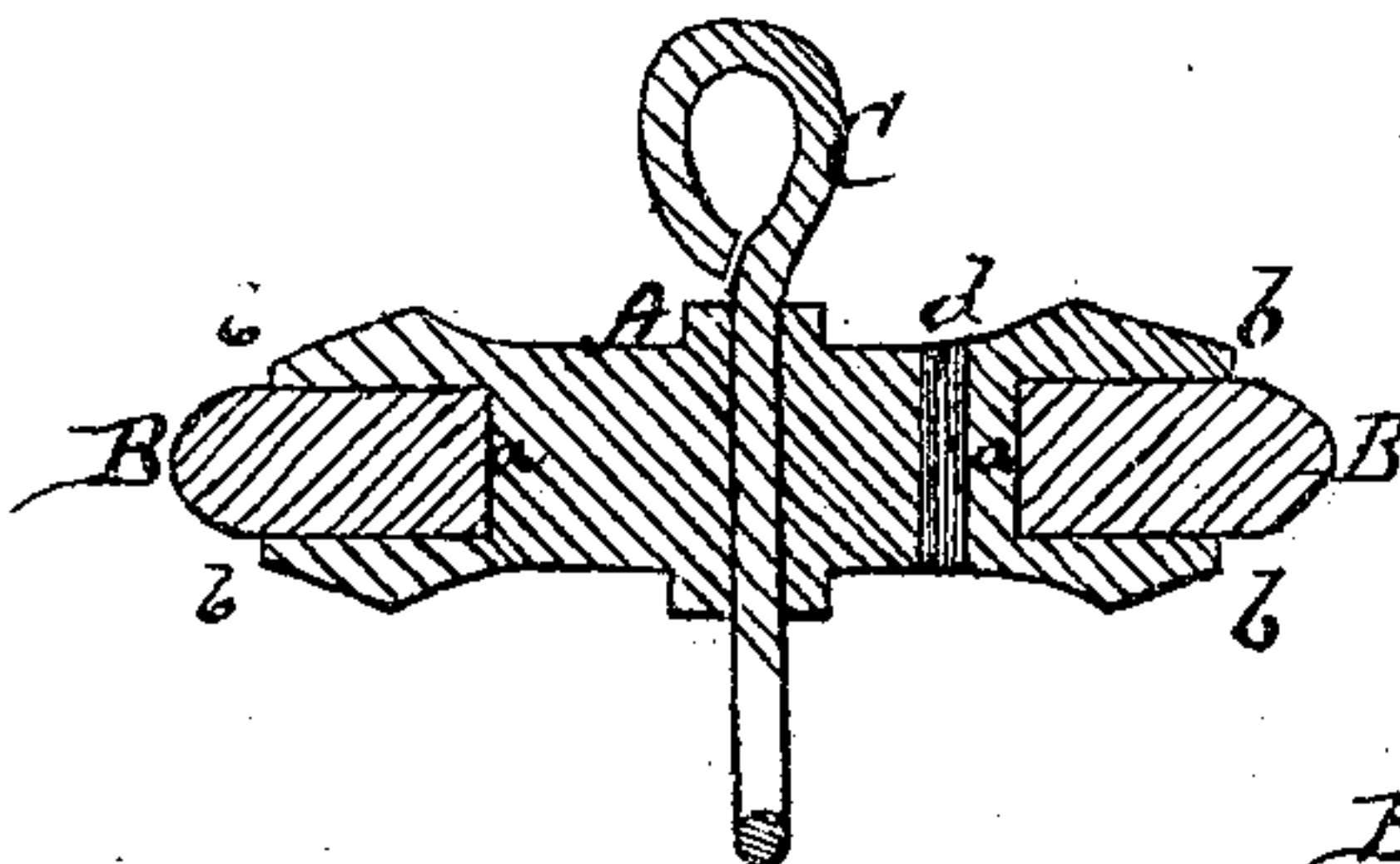


Fig 4

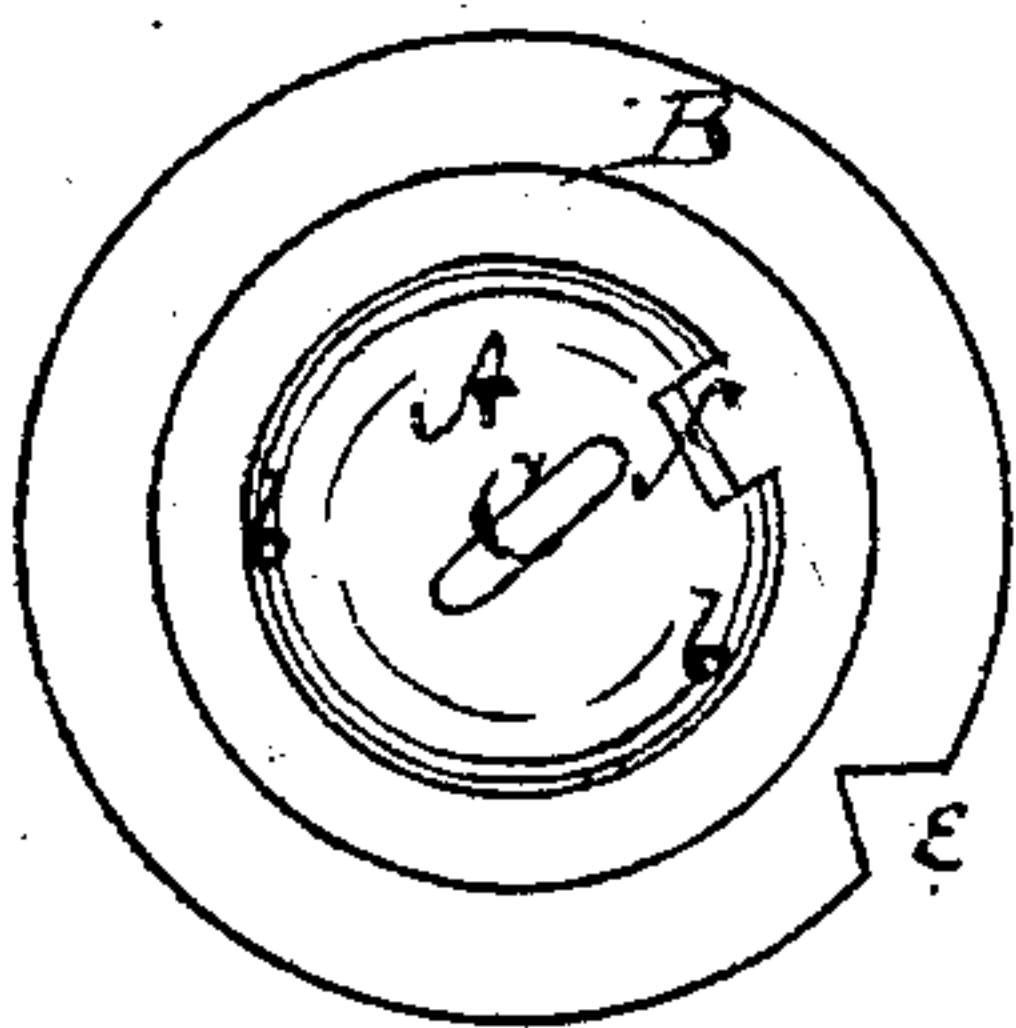
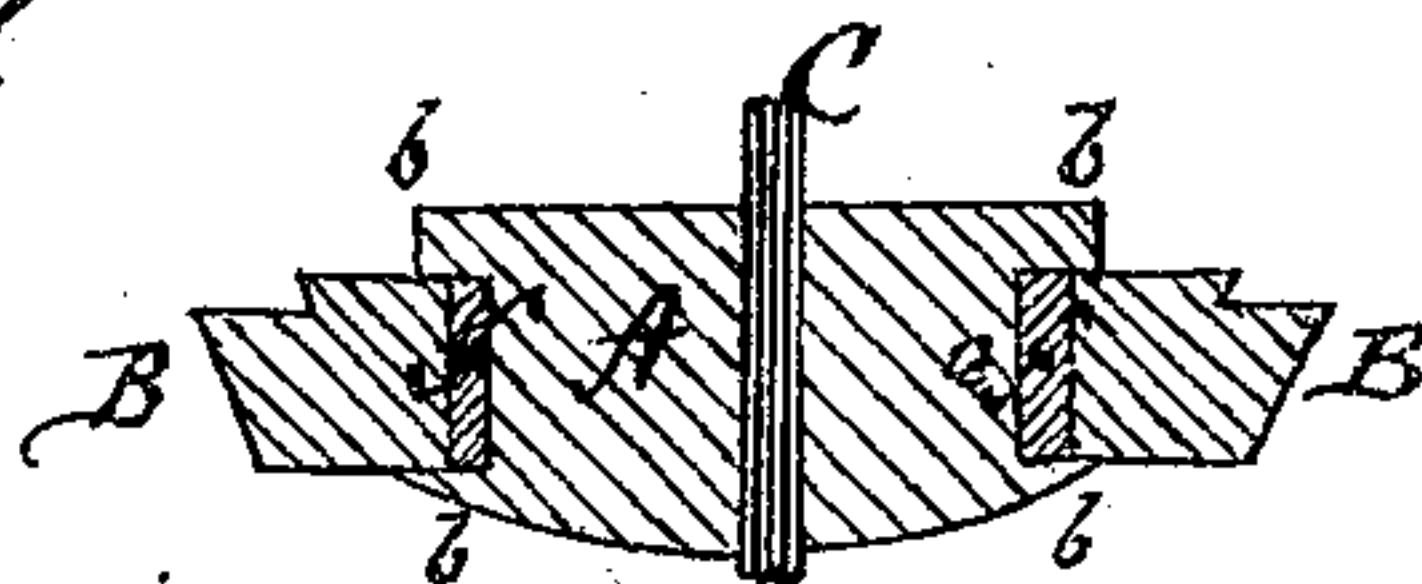


Fig 5



Witnesses  
Francis L. Duward  
A. L. Evers

Inventor  
William Cooper,  
per  
Alexander Mason  
Attorneys.

# UNITED STATES PATENT OFFICE.

WILLIAM COOPER, OF YPSILANTI, MICHIGAN.

## IMPROVEMENT IN CHAIN-PUMPS.

Specification forming part of Letters Patent No. 127,576, dated June 4, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM COOPER, of Ypsilanti, in the county of Washtenaw and in the State of Michigan, have invented certain new and useful Improvements in Chain-Pump; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "bucket for a chain-pump," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, Fig. 2 a side view, and Fig. 3 a longitudinal section, of my chain-pump bucket. Fig. 4 is a plan view, and Fig. 5 a longitudinal vertical section, of the same, showing the means for tightening or expanding the same when reduced by wear.

A represents a wheel made of any suitable material, and provided with a deep circumferential groove, *a*, leaving a flange, *b*, on either side. In the groove *a*, between the flanges *b*, is placed a thick rubber collar, B, projecting a suitable distance beyond the flanges, as shown. Through the center of the wheel A is

passed a wire, C, forming hooks or eyes at each end to connect with the adjoining buckets on both sides. *d* represents the vent, usually made through the buckets of chain-pumps. These vents are very liable to become stopped up, and to obviate this difficulty I make a notch, *e*, in the edge of the rubber collar B to answer for a vent, which can readily be cleared if it should become clogged.

When the collar or band B wears so that it does not fill the tube, it can be removed and a piece, *f*, of leather or other material inserted to increase the size of the rubber, and thus fill the tube as good as new.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The wheel A, having groove *a*, flanges *b*, and wire C, and provided in the groove *a* with the rubber collar B, having vent or notch *e*, substantially as herein set forth.

2. In combination with the above, the leather or other material *f*, inserted in the groove *a*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of March, 1872.

WILLIAM COOPER.

Witnesses:

S. M. CUTCHEON,  
A. G. STARR.

5  
march