

C. Roberts,

Universal Joint.

No. 98885.

Patented Jan. 18. 1870.

Fig. 1

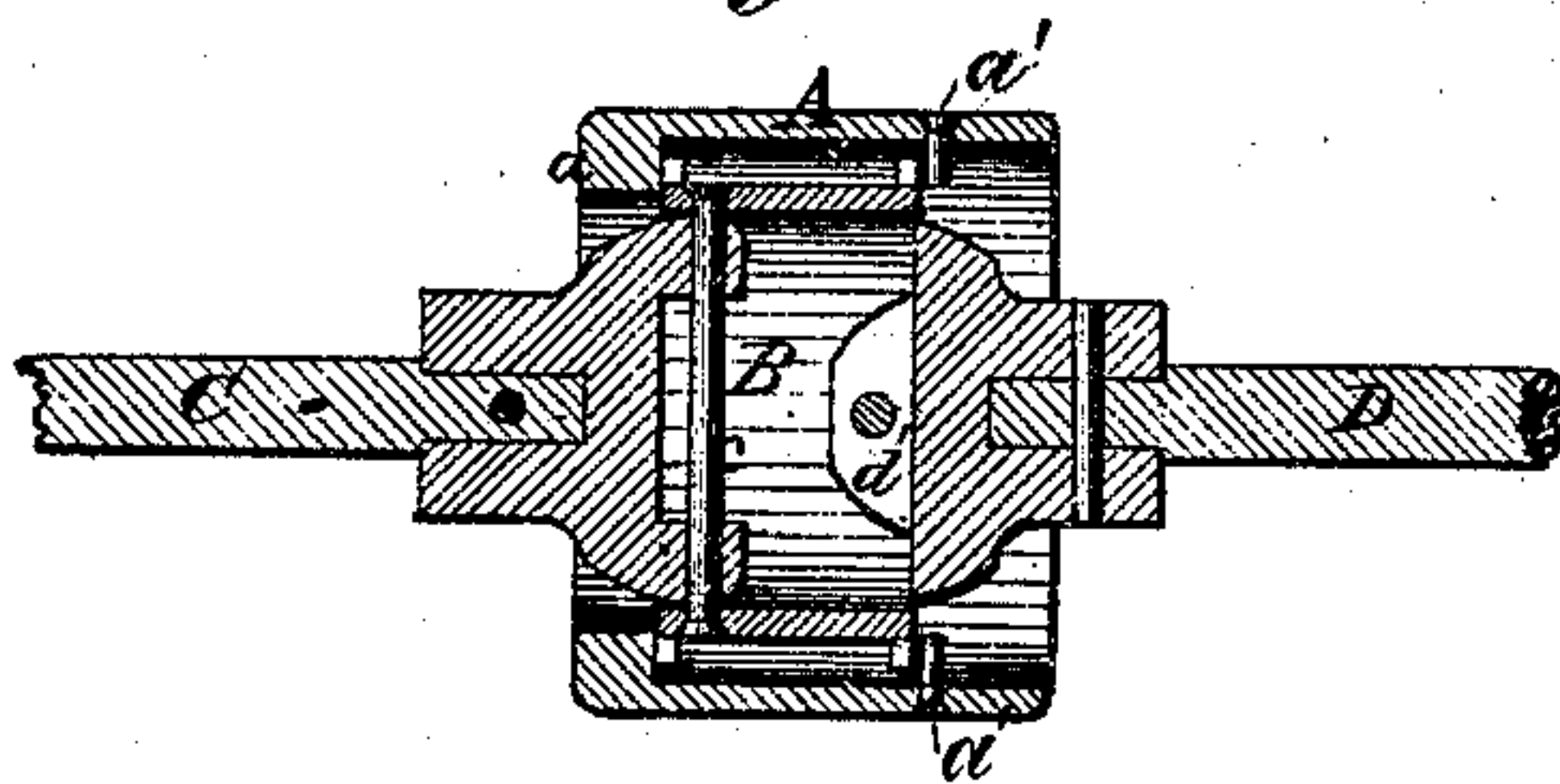


Fig. 2

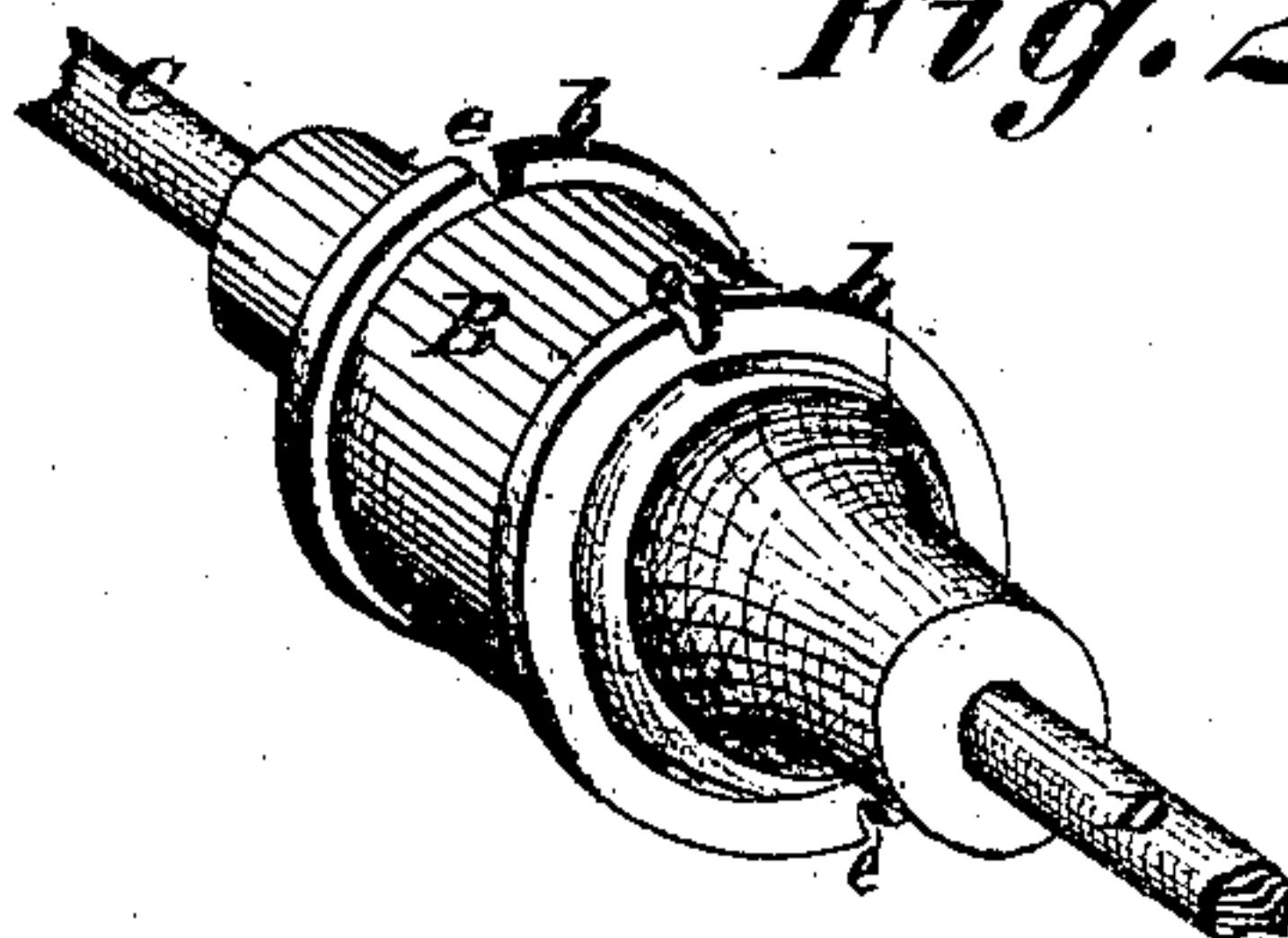


Fig. 3

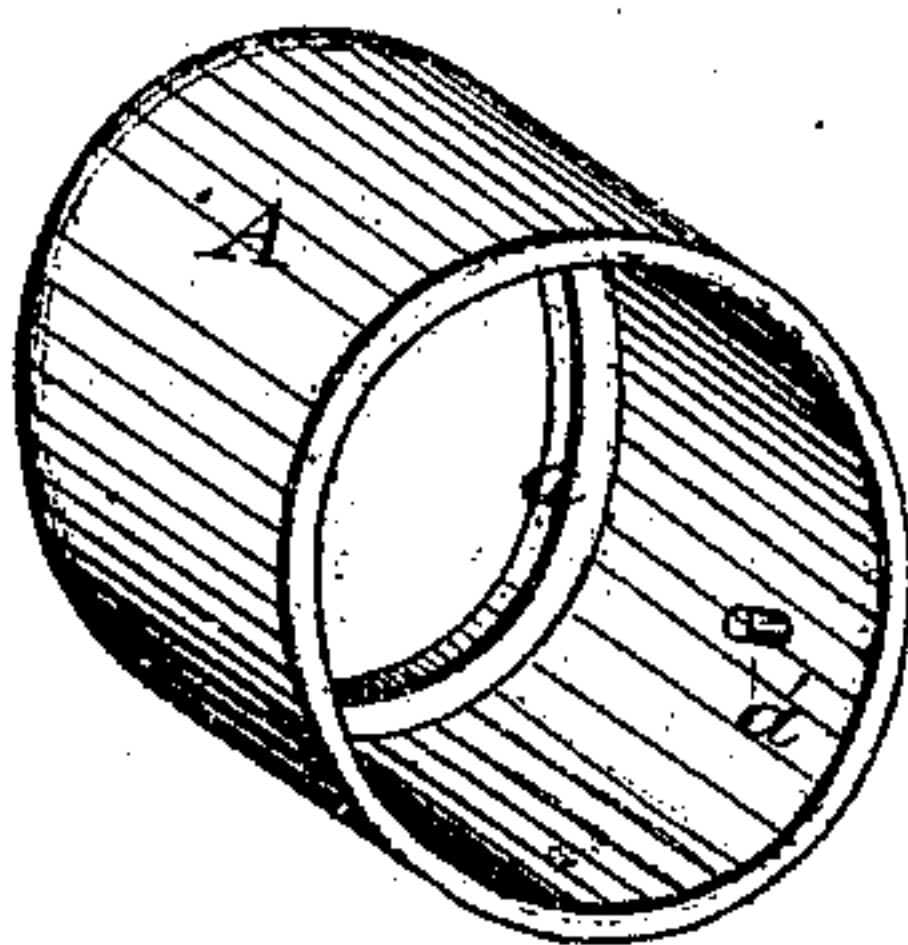
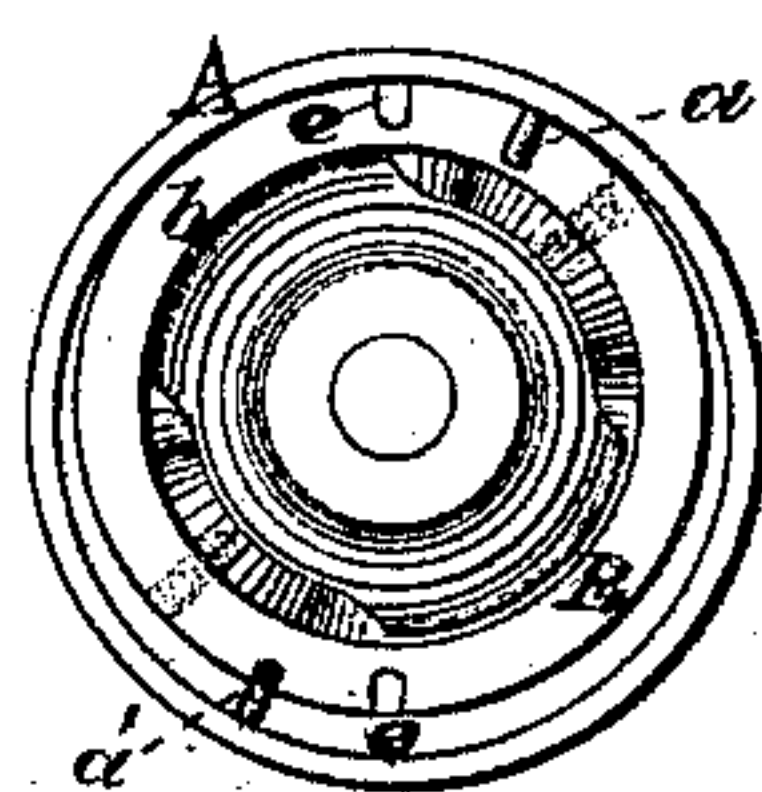


Fig. 4



Witnesses:-
John Peyton.
A. H. Bone.

Inventor:-
Cyrus Roberts
by his atty
Wm. D. Baldwin

UNITED STATES PATENT OFFICE.

CYRUS ROBERTS, OF THREE RIVERS, MICHIGAN.

IMPROVEMENT IN UNIVERSAL JOINTS FOR SHAFTING.

Specification forming part of Letters Patent No. 98,885, dated January 18, 1870.

To all whom it may concern:

Be it known that I, CYRUS ROBERTS, of Three Rivers, in the county of St. Joseph and State of Michigan, have invented a new and useful Improvement in Universal-Joint Couplings for Shafting, of which the following is a full, clear, and exact description.

My invention has for its object the prevention of accidents by covering the working parts of the joint to prevent the workman from being caught by the mechanism while in motion and my improvement consists in combining two shafts vibrating on pivots at right angles to each other in a ring and a loose covering-thimble protecting the joint.

My invention further consists in combining a coupling-ring having flanges on its periphery transversely slotted with a covering-thimble flanged internally at one end and having pins at the other to slip in the slots of the flanges, and thus hold the covering-thimble over the joint.

My invention further consists in making the thimble larger than the ring, so that it will rest on the ring, and thus cause the lower side to be eccentric to the ring and its pins to project below the slot in the flange, thereby preventing the thimble from escaping from the ring while in motion.

In the accompanying drawings, Figure 1 represents a longitudinal section through my improved joint; Fig. 2, a perspective view of the same; Fig. 3, a similar view of the thimble detached; Fig. 4, an end view of the joint.

The thimble A is made with an internal flange, *a*, at one end and internally-projecting studs *a'* near the other. The ring B has flanges *b* on its periphery. These flanges have transverse slots *e* in them corresponding with the studs *a'*. The shafts C D have jaws on their inner ends rocking on their respective pivots *c d* in the thimble at right angles to each other.

In operation, the thimble is slipped over the ring, its studs passing through the grooves in one of the flanges of the ring. The thimble is

then turned until the pins have passed from opposite the grooves, as shown in Fig. 4. The thimble being larger than the ring, its upper inner surface rests on the ring, while its lower surface is eccentric to the ring. The studs, being longer than the grooves in the flanges, always project beyond them and abut against the flange when passing the upper side of the ring, by which means the thimble is prevented from slipping off the ring. Ordinarily the thimble revolves with the ring; but the ring is free to turn loosely therein. The flanges serve, also, to protect the heads of the pivots *c d*, which project through the ring.

I am aware that the joint herein shown is old, but am not aware that a flanged slotted ring and a loose thimble have heretofore been combined. The motion of the ring is so rapid that the thimble is easily kept on by a slight stud projecting inwardly.

It is obvious that the thimble could be held on the ring by pins on each side thereof without slots in the flanges, but the thimble could not then be removed without removing the studs. The slots in both flanges enable me to slip the thimble over the ring from either side.

I claim as my invention—

1. The combination of the shafts, the ring, and the loose thimble, all these parts being constructed to operate substantially as hereinbefore set forth.

2. The combination of the ring having annular transversely-slotted flanges with the loose thimble internally flanged at one end, and having internal studs at the other, as set forth.

3. Constructing the thimble of a diameter larger than the ring, and with studs larger than the grooves in the flanges of the ring to prevent the escape of the thimble, as set forth.

In testimony whereof I have hereunto subscribed my name.

CYRUS ROBERTS.

Witnesses:

JAS. H. LYON,
E. JAY ENSIGN.