

P. W. RICHARDS.

Improvement in Metallic Packing for Piston-Rods, &c.

No. 132,024.

Patented Oct. 8, 1872.

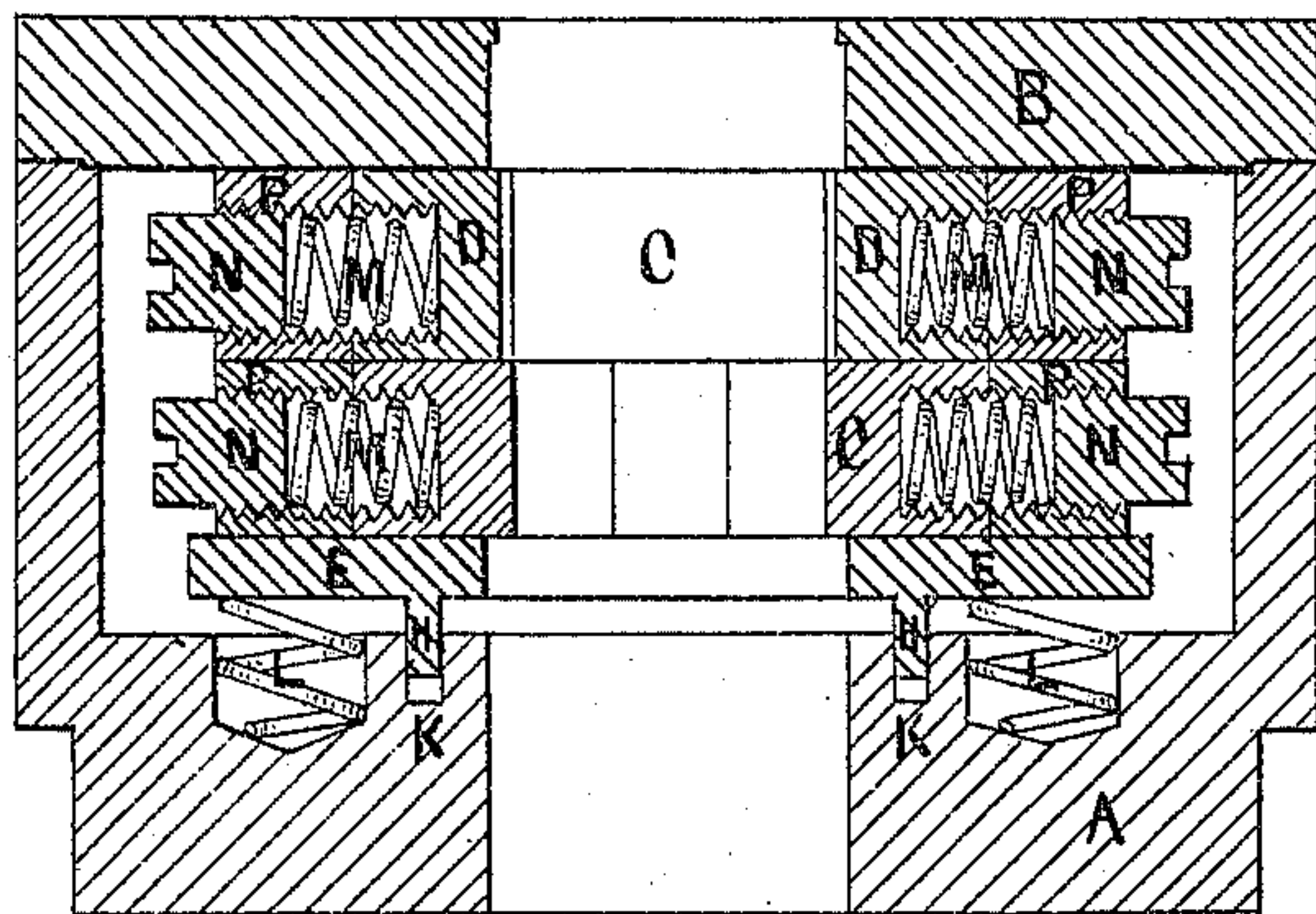


Fig. 1.

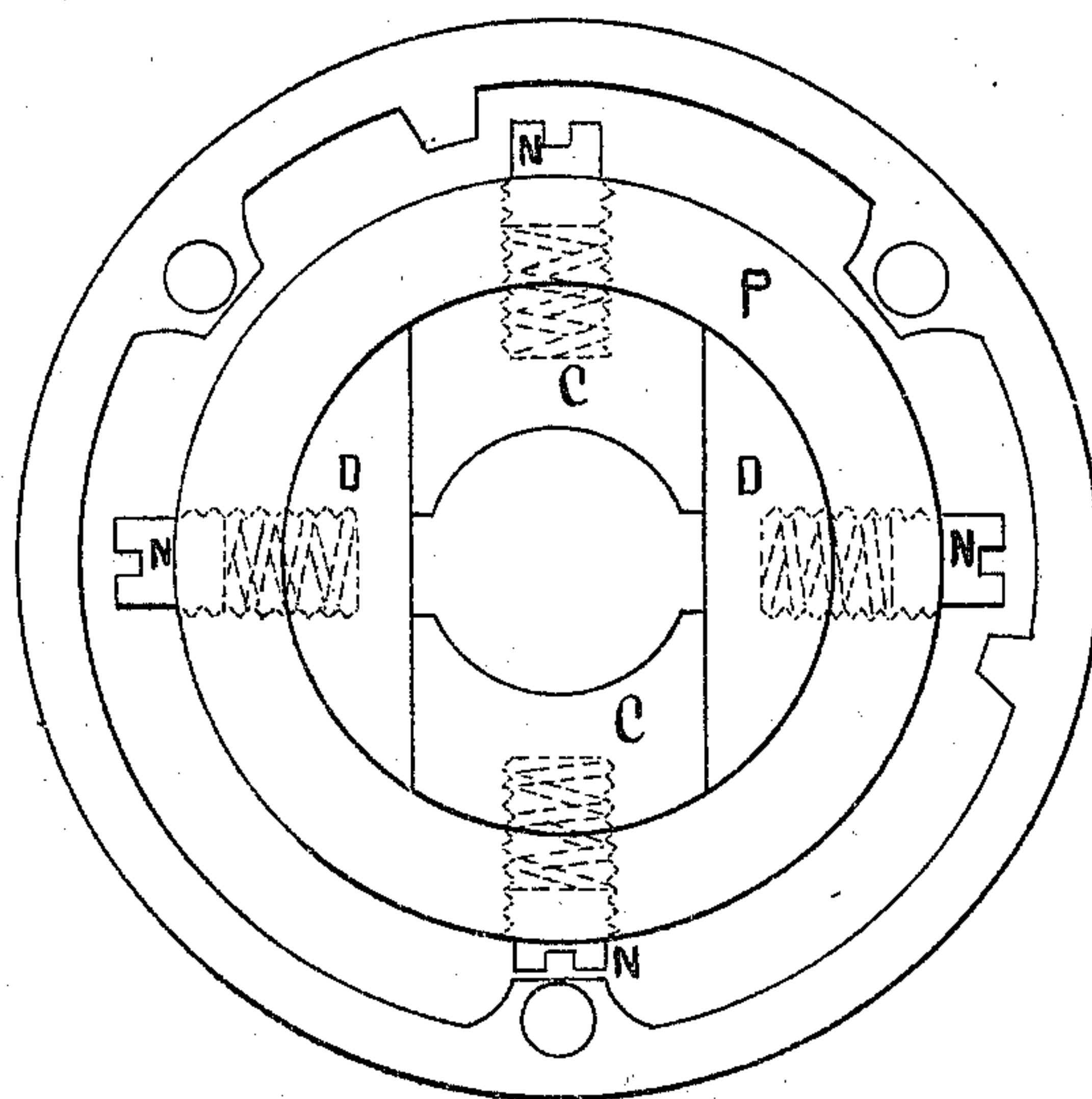


Fig. 2

WITNESSES

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PHILLIP W. RICHARDS, OF BOSTON, ASSIGNOR TO HIMSELF, EDWARD STONE,
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IMPROVEMENT IN METALLIC PACKINGS FOR PISTON-RODS, &c.

Specification forming part of Letters Patent No. 132,024, dated October 8, 1872.

To all whom it may concern:

Be it known that I, PHILLIP W. RICHARDS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Metallic Packing for Piston-Rods and Valve-Stems, of which the following is a specification:

Nature of the Invention.

The nature of my invention consists in an improvement in that class of metallic packings in which metallic segments are used to bear against the rod, the segments being acted upon by springs for that purpose. The improvement is essentially embraced in the use of independent rings for each set of segments; the faces of said rings, together with the corresponding surfaces of the segments, being finished to a true plane, so that the different rings, including the segments, will lie steam-tight upon each other. All the parts are held together by springs properly located. The invention also embraces some improvements in details, which will be explained in the description.

Description of the Drawing.

Figure 1 shows a vertical section of my invention; Fig. 2 is a plan of my packing-box, the cover being removed so as to show one of the rings and its inclosed segments.

General Description.

Let A represent the outer box or casing. At the bottom of this box the disk E is located. This disk is perfectly flat on its upper side, as shown. The under side of this disk is provided with an annular projection, H, which fits accurately into the groove K, and serves to prevent the steam from passing between the under side of the plate E and the bottom of the box A. L L are springs which

serve to press the plate E upward, and to compress the rings P P against each other and the upper plate B. P represents a ring, made as shown. Within this ring the segment pieces D D C C are placed. These segment pieces are formed as shown, and are each held in place by the springs M M and screws N N. I prefer to use two of these segment-holding rings, P P, but more may be used, if desirable.

In placing these rings one upon another I so locate them that the segment represented by C in one ring will overlay the segment represented by D in the other. The cover B fits the upper face of the ring with a ground joint, so that parts may fit steam-tight.

From the above it will be seen that if the cover B fits tight upon the box A no steam can escape except by passing through the ground joints; and as these are all made tight by the pressure of springs, there is really no liability to leakage. By having the segments which form the packing connected by a ring which is free from the box or case the parts are left free to adjust themselves; and if the contacting parts are made true and smooth, and are held together by springs, it is evident that there can be no leakage.

I claim as my invention—

1. In a steam packing-box, the combination of the rings P P, segments D D C C, and springs M M with the plate E and springs L, constructed and arranged substantially as described, and for the purpose set forth.

2. The plate E, having an annular projection, H, in combination with the springs L and box A B, constructed and arranged substantially as described, and for the purpose set forth.

PHILLIP W. RICHARDS.

Witnesses:

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