

T. CARPENTER.

METHOD OF OILING SLIDES OF STEAM ENGINES.

No. 34,876.

Patented Apr. 8, 1862.

Fig. 1

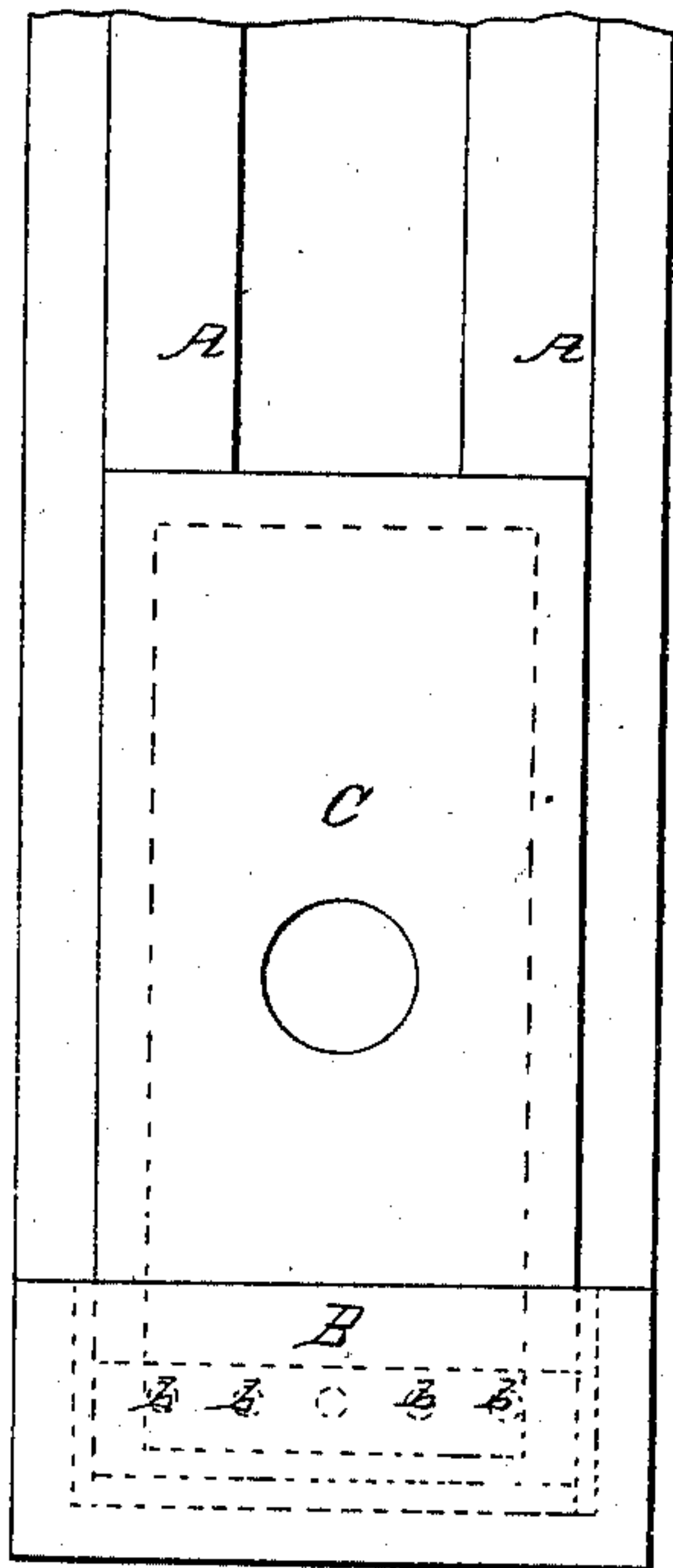


Fig. 2

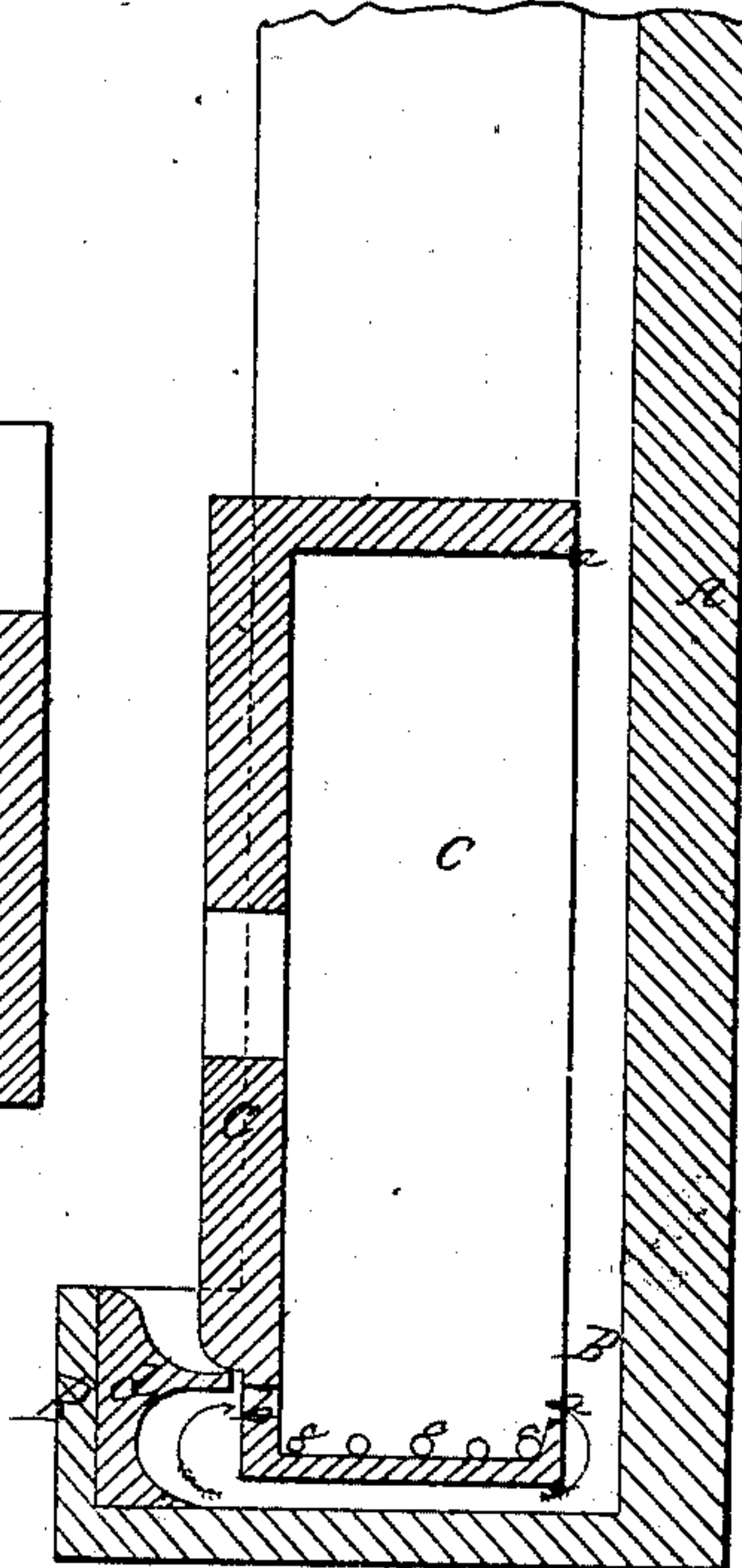


Fig. 3

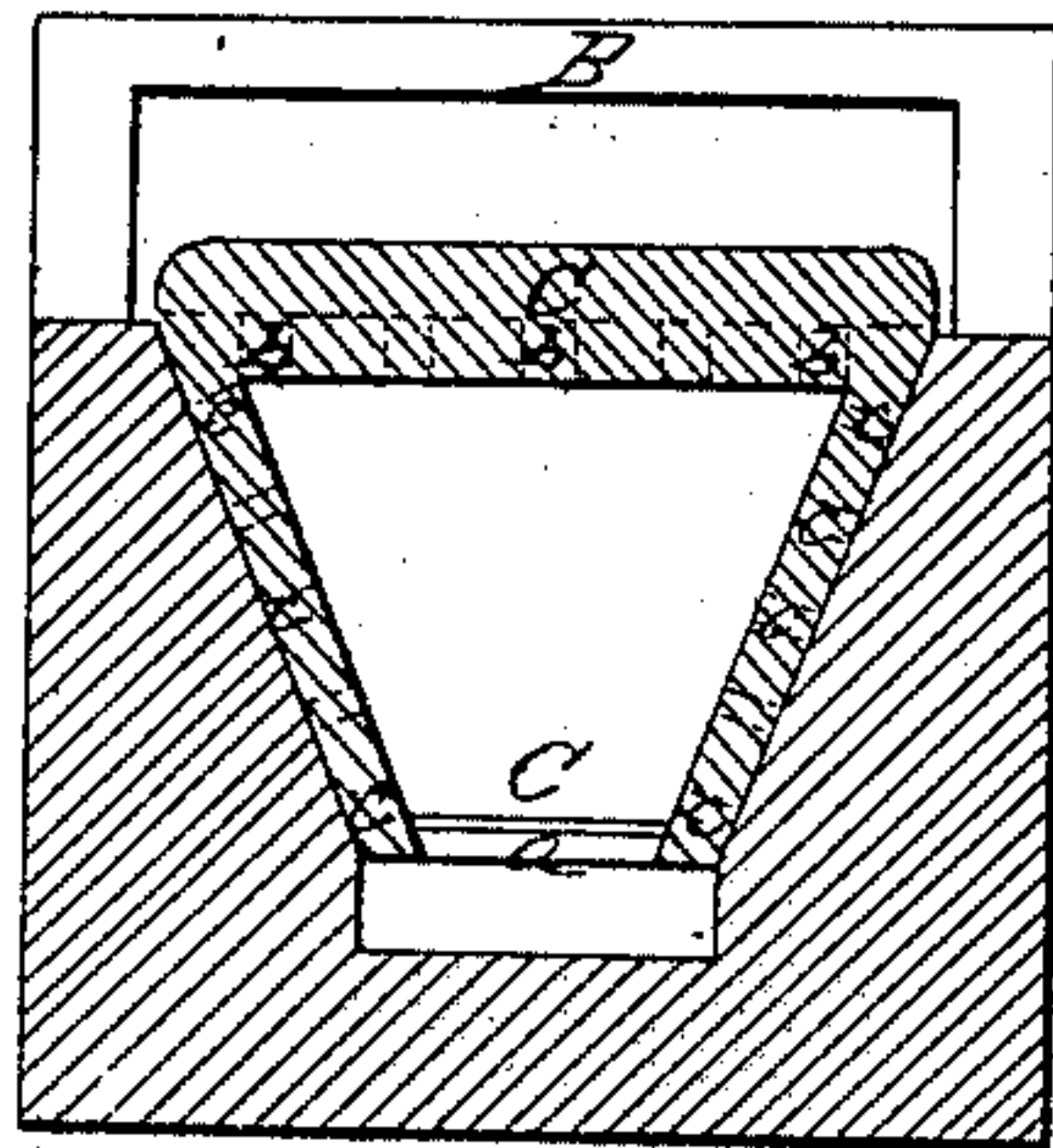


Fig. 4

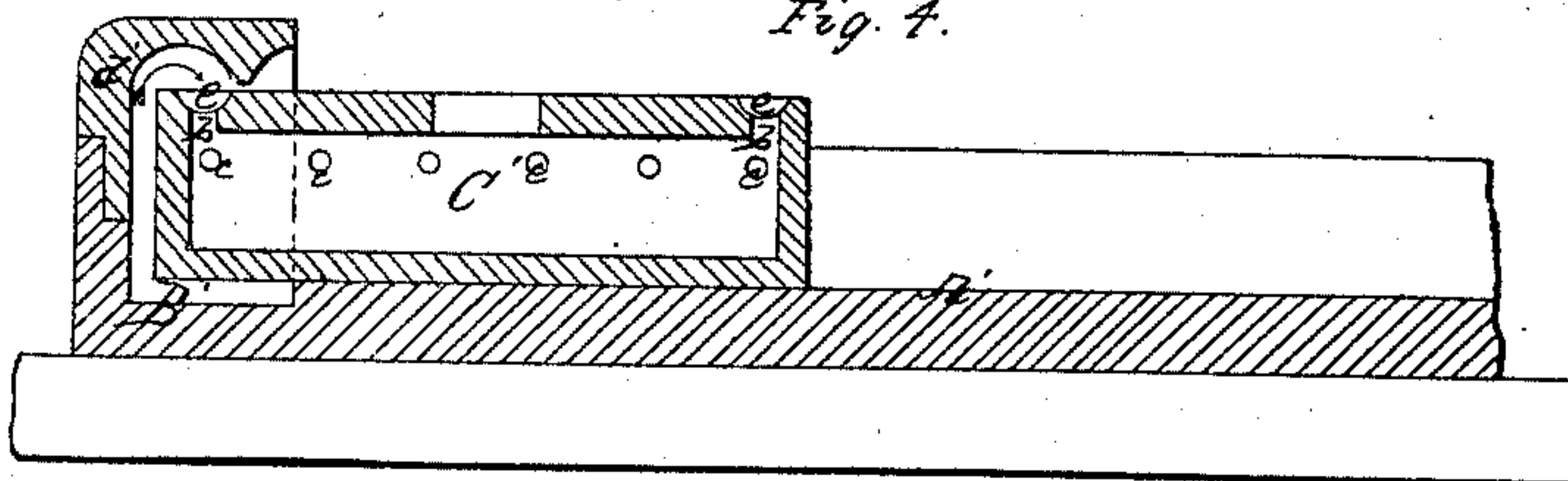


Fig. 6

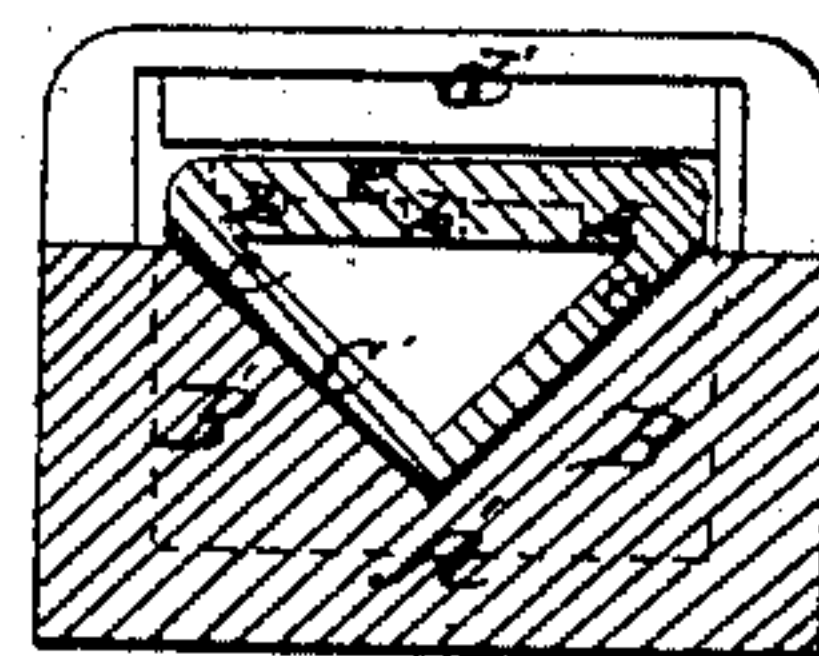
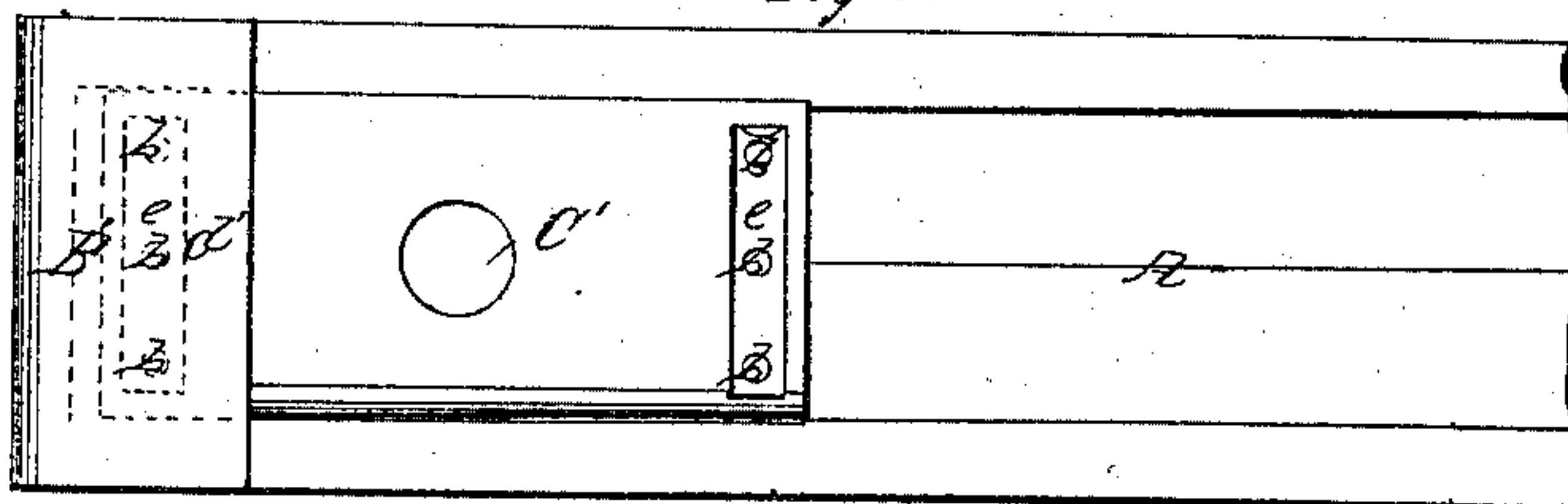


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

TISDALE CARPENTER, OF PROVIDENCE, RHODE ISLAND.

METHOD OF OILING SLIDES OF STEAM-ENGINES.

Specification of Letters Patent No. 34,876, dated April 8, 1862.

To all whom it may concern:

Be it known that I, TISDALE CARPENTER, of Providence, in the county of Providence and State of Rhode Island, have invented a new and Improved Means of Oiling the Slides of Steam-Engines and other Machinery; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a face view of the lower portion of a vertical slide and of the gib or shoe of a cross head working therein illustrating the application of my invention to that kind of slide. Fig. 2 is a vertical section of the same at right angles to Fig. 1. Fig. 3 is a horizontal section of the same. Fig. 4 is a vertical longitudinal section of a portion of a horizontally arranged slide and the gib or shoe working therein illustrating the application of the invention to the so arranged slide. Fig. 5 is a top view of the same. Fig. 6 is a transverse section of the same.

Similar letters of reference indicate corresponding parts wherever they are used in the several figures.

The object of this invention is to render self-lubricating the gibs and slides of steam engines or other machines having cross heads or their equivalents working in straight guides, and allow the oil employed in such lubrication to be used over and over again as long as may be desirable instead of being thrown off from the slide and lost or wasted.

It consists in the combination of a hollow gib or shoe and an oil reservoir at the bottom or at each or at either end of the slide, the said gib or shoe being constructed with suitable openings for the reception of oil from the reservoir or reservoirs and for the delivery of such oil upon the surface of the slide.

To enable others skilled in the art to make and apply my invention I will proceed to describe its construction and operation.

The vertical slide A, represented in Figs. 1, 2, and 3, has the reservoir B, at the bottom, such reservoir being formed to surround the lower portion of the gib or shoe C, of the cross head to some depth when the latter arrives at the bottom of its stroke as shown in Fig. 2. The gib or shoe C, is made hollow and open nearly the whole length of its back as shown at *a, a*, and near the bottom it has apertures *b, b*, in the front or outer side for the induction of the oil from

the reservoir, and smaller apertures *c, c*, in its working faces for the delivery of the oil upon the faces of the slide. The reservoir B, has fitted to its front side a cap or shield *d*, which serves to prevent the oil from splashing out of the reservoir when the gib or shoe strikes into it, and which is so formed as to conduct the oil through the apertures *b, b*, into the interior of the gib or shoe as indicated by an arrow in Fig. 2. Every time the gib or shoe C descends it dips into the oil contained in the reservoir and takes in a quantity of oil both through the opening *a*, and through the apertures *b, b*, and as it ascends this oil is delivered through the apertures *c, c*, on the faces of the slide down which it runs by gravitation back to the reservoir from whence it is taken over and over again in the same manner and re-delivered on the faces of the slide.

The horizontal slide A, represented in Figs. 4, 5, and 6, may have an oil reservoir B', at one or at each end but when practicable should have one at each end. The reservoir B', is covered by a cap piece *d'*, whose interior is formed like that of *d*, before described and for the same purpose.

The horizontally-working hollow gib or shoe C, has cavities *e, e*, formed nearly all across its upper side near its ends for the reception of the oil from the reservoir, and at the bottom of these cavities are the apertures *b, b*, for the induction of the oil to the interior of the gib or shoe from whence it is delivered on to the faces of the slide through the apertures *c, c*, arranged along the upper part of the sides of the gib or shoe, the operation being essentially the same as with the vertical slide.

When the slide occupies an inclined position the reservoir is to be arranged at the lower end.

What I claim as my invention and desire to secure by Letters Patent is—

1. The combination of the oil reservoir at the bottom or either end of the slide and the hollow gib or shoe substantially as and for the purpose herein specified.

2. Furnishing the oil reservoir with a cap piece or shield *d*, or its equivalent formed to direct the oil to the induction opening *b, b*, of the hollow gib or shoe substantially as herein specified.

TISDALE CARPENTER.

Witnesses:

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