J. W. Murphy,

Turn Table.

No. 113,685. Patented Apr. 11. 1871.

Fig. 1.

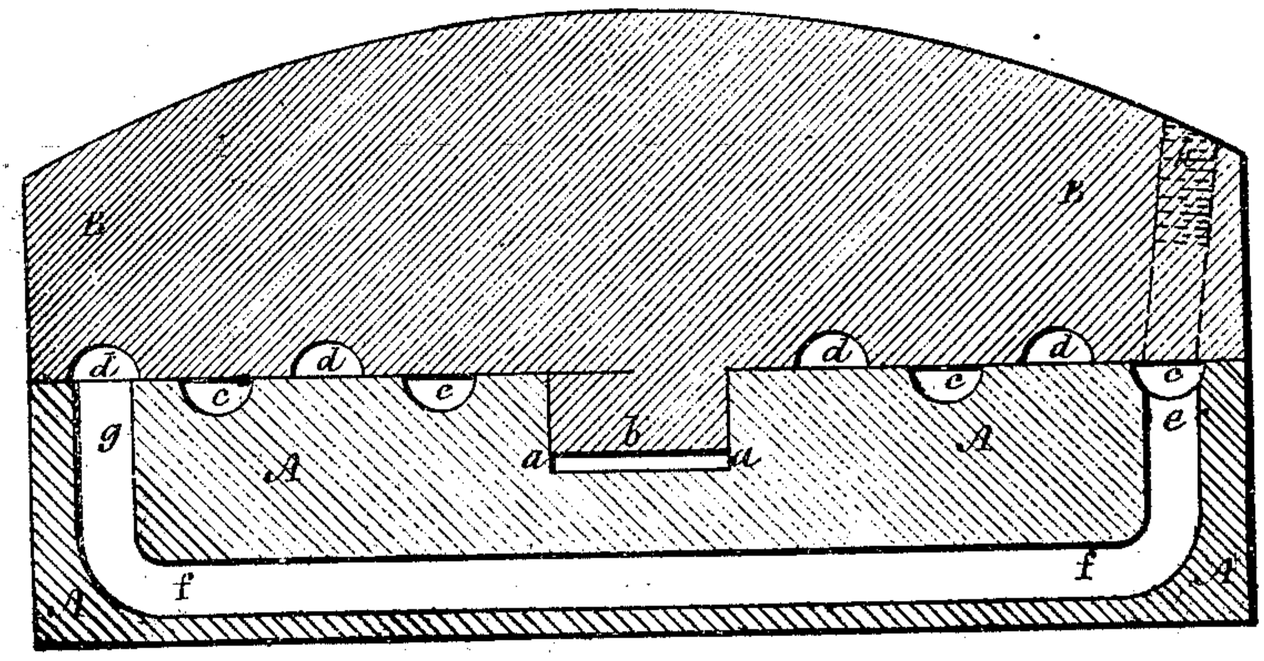
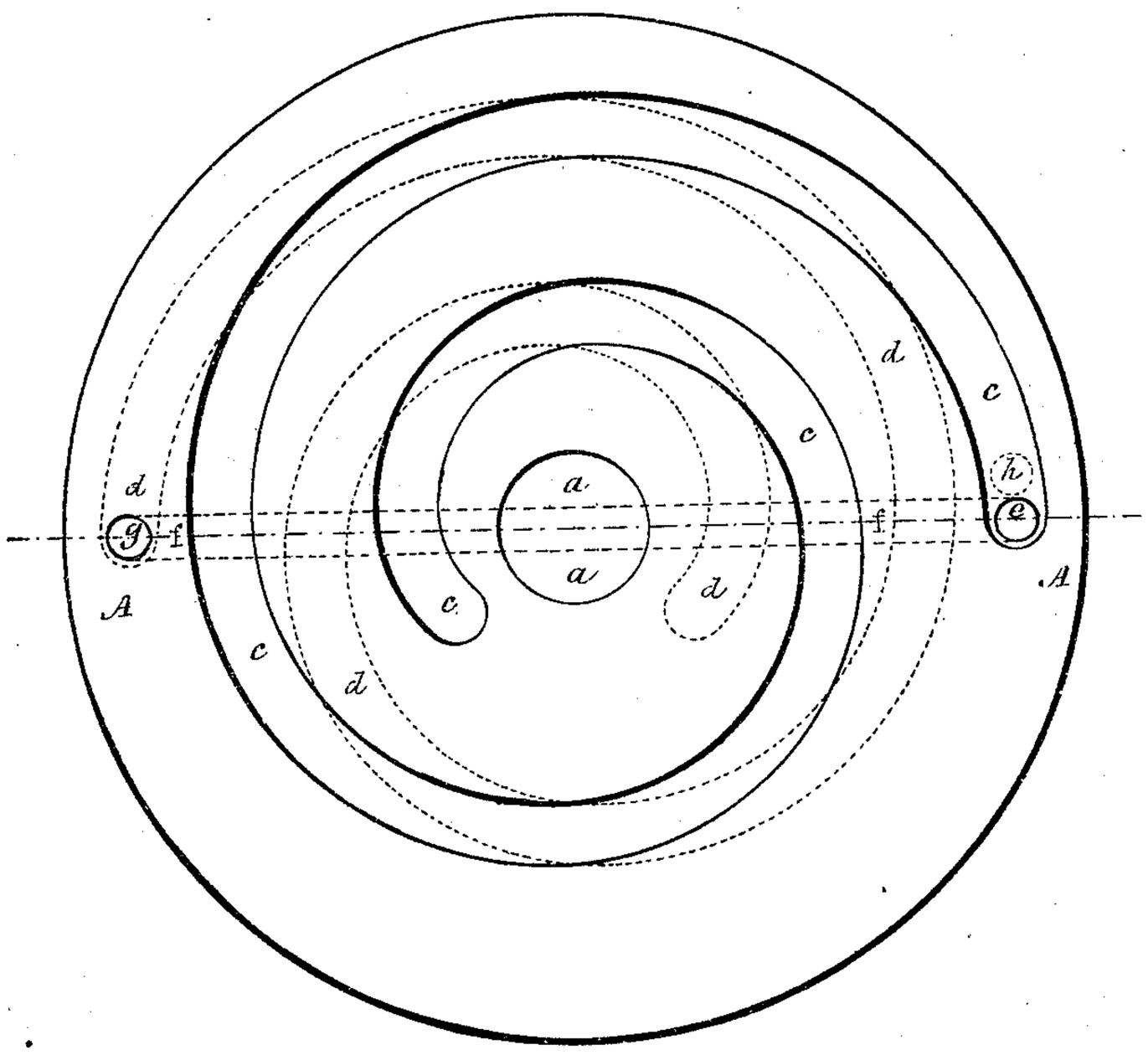


Fig. 2.



Witnesses.
W. C. Henderson
Edmund Masson.

John W. Murphy.
By atty. A. B. Stoughton.

United States Patent Office.

JOHN W. MURPHY, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 113,685, dated April 11, 1871.

IMPROVEMENT IN LUBRICATING PIVOTS FOR TURN-TABLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN W. MURPHY, of the city of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Lubricating Pivots or Steps for Turn-Tables for Railroad and other purposes; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a vertical section through the pivot or step; and

Figure 2 represents a top plan of one part of the pivot or step with its spiral groove in full black lines, and the groove of the other part, as well as the oil-holder and distributer in dotted lines.

Similar letters of reference where they occur in the separate figures denote like parts of the stop or pivot in the drawing.

My invention consists in forming in the two adjacent and contiguous surfaces of the step or pivot spiral or other shaped grooves running in contrary directions, so that the turning of either or both shall cause the lubricating material in the groove or grooves to be distributed over the whole of the bearing surfaces and thus uniformly lubricate them.

My invention further consists in arranging, in connection with the pivot or step, an oil-receiver and passages, through and by means of which the oil or other lubricator may be supplied from the exterior to the interior working or bearing surfaces.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

A represents the under part or portion of the step or pivot, and

B the upper part or portion thereof.

A circular recess, *a*, is made in one part to receive a circular projection, *b*, on the other part, so that they may turn truly one on or against the other.

In or on the bearing face of the part A is formed, by casting or otherwise, a spiral groove, *c*, running in one direction from near its center to near its perimeter; and in or on the other part B a similar groove, *d*, running in a contrary direction, so that the grooves, when the step or pivot is moved by the turning of the table, shall pass over each other with a shear movement that carries the oil or other lubricator over almost the entire frictional or bearing surfaces.

In the under part A of the step or pivot is a vertical well or passage, *e*, which unites with a horizontal passage, *f*, extending across, or nearly so, this portion of the step or pivot, and at the diametric opposite end of the passage *f* there is a vertical passage, *g*, that leads up to the bearing surfaces of the two parts A B.

Through or in the upper portion B there is an opening, *h*, which may be closed with a screw-plug or cap, and which opening, when the parts are properly turned for that purpose, comes immediately over the well *e*, so that the lubricating material may be introduced into the passages in the under portion A, through and from the exterior of the upper portion B, and thence by means of the grooves *c d* throughout the bearing surfaces.

I have mentioned the grooves as being spiral. I prefer them of that general form, as they are easily made and serve the purpose well; but I do not confine myself to that precise form, because other forms of grooves may be made that will cross or pass each other with a shear or oblique motion, and carry and distribute the oil throughout the bearing or frictional surfaces, which is the essence of my invention.

Branch openings or passages may be made from the passage *f*, so as to allow the lubricating material to come to the bearing surfaces at several points, or where they connect with the grooves.

Having thus fully described my invention,

What I claim is—

1. A pivot or step for turn-tables, composed of an under and upper piece, with grooves in their bearing or working surfaces running in contrary directions so as to distribute the oil or other lubricating compound in the grooves throughout the bearing surfaces, substantially as described and represented.

2. In combination with the two parts of the pivot or step and their oil-grooves passing each other in oblique lines, the oil-passage or passages *h e f g*, for introducing the oil or other lubricator from the exterior to the interior bearing surfaces, substantially as described.

JOHN W. MURPHY.

Witnesses:

JOHN DYER,

FRANK WM. GETZ.