R. W. NORTON.

Clock Pendulum.

No. 111,672. Patented Feb. 7, 1871.

fig. 1.

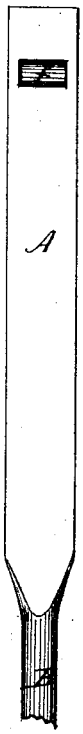

fig. 2.

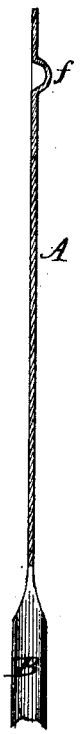

fig. 3.

fig. 4.

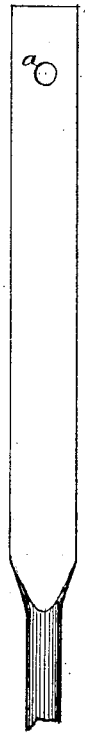

fig. 5.

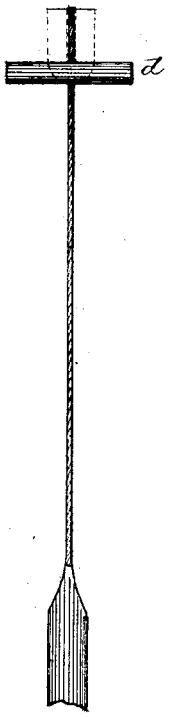

fig. 6.

fig. 7.

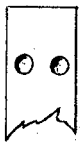

fig. 8.

Witnesses
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RUSSELL W. NORTON, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 111,672, dated February 7, 1871.

IMPROVEMENT IN CLOCK-PENDULUM RODS.

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, RUSSELL W. NORTON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new improvement in Clock-pendulum Rods; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent in—

Figure 1 a side view;

Figure 2, a sectional or edge view of my improvement;

Figure 3, a side view of the old method,

Figures 4 and 5, the construction of the same;

Figures 6, 7, and 8, modifications of my invention.

All the views are enlarged.

This invention relates to an improvement in the construction of the upper end of pendulum-rods, the object being an improvement in the device by which the upper end of the pendulum is secured in its bearing.

Heretofore this has been done, as seen in figs. 3, 4, and 5.

Near the upper end of the flat portion of the rod is a perforation, *a*, through which a piece of wire, *d*, is placed and bent up each side, as denoted in broken lines, fig. 5, and as seen in fig. 3.

This process necessitates considerable hand-labor, and in small rods the bending of the wire often breaks or tears out the end of the rod.

By my invention the operation is very much simplified, and no liability to breaking the rod; and

It consists in indenting the flattened portion of the rod, near the upper end, so as to form practically an enlargement or bearing for the support of the rod.

A is the flattened portion of the rod B, formed in the usual manner. The flattened portion is then placed between suitable dies, which being struck together indent or bend the rod, as seen at *f*, fig. 2.

This bend is placed immediately over the support to which the rod is hung, and sustains the rod in position.

In addition to its simplicity, this construction is a great advantage over the old, inasmuch that if the perforation *a* be not in the center of the rod it will not hang in a perpendicular position, hanging out or in accordingly as the perforation is to one side or the other; whereas, by my improvement, the indentation is made square across the flat portion of the rod, so that a perpendicular pendulum is insured.

I have represented the construction as an indentation, yet it may be simply a groove formed entirely across the rod, as seen in fig. 6, by bending into the form seen in fig. 2, or two indentations may be made, as seen in fig. 7, so as to retain the rod in a perpendicular position.

Further, a single indentation, as in fig. 8, may be made, which will be open only to the single difficulty of hanging in a perpendicular position, as explained by the perforation in the old plan. I prefer, however, the groove or indentation across the rod, as it overcomes every difficulty, and is made at a comparatively trifling expense.

I do not wish to be understood as broadly claiming the construction of the rod so that it may be suspended without the addition of parts or pieces to the rod.

I claim as my invention—

The pendulum-rod, constructed with an indentation near the upper end of the flattened portion, substantially in the manner and for the purpose set forth.

R. W. NORTON.

Witnesses:

A. J. TIBBITS,

J. H SHUMWAY.