

H. KURTH.

Composition for Journal Bearings.

No. 148,615.

Patented March 17, 1874.

Fig. 1.

Perspective View.

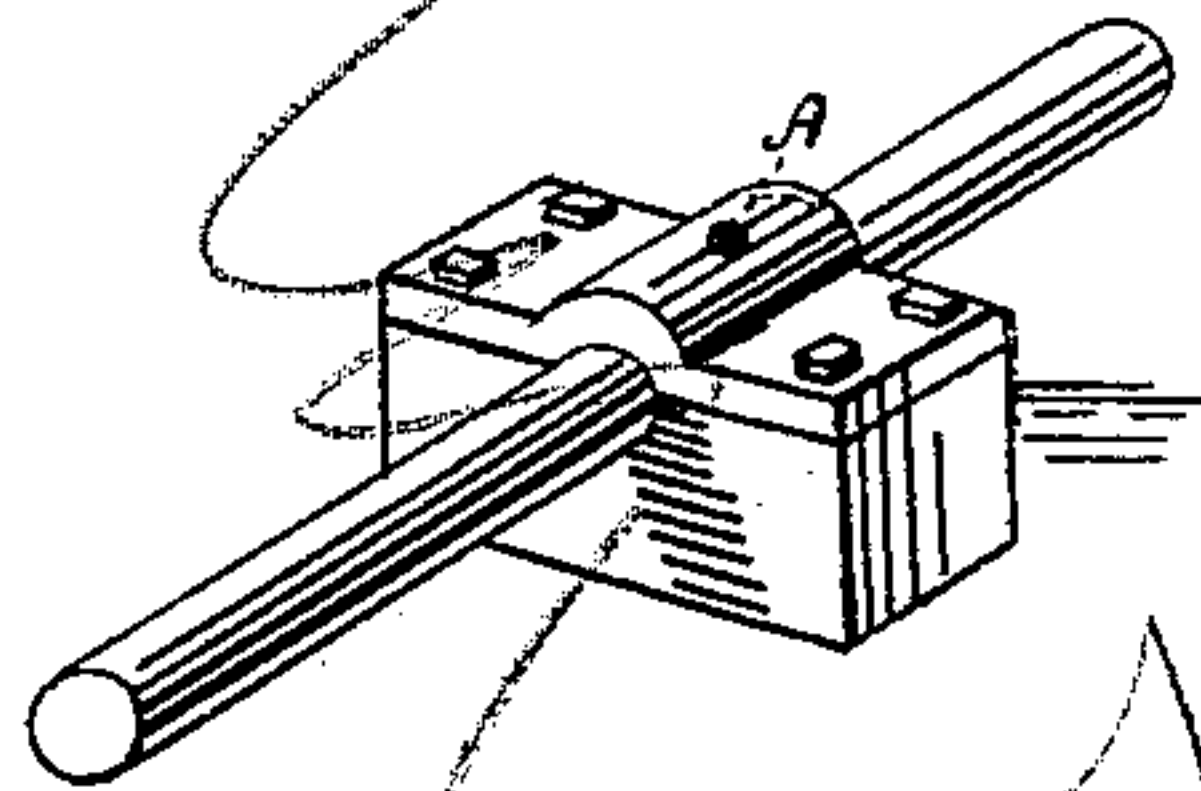
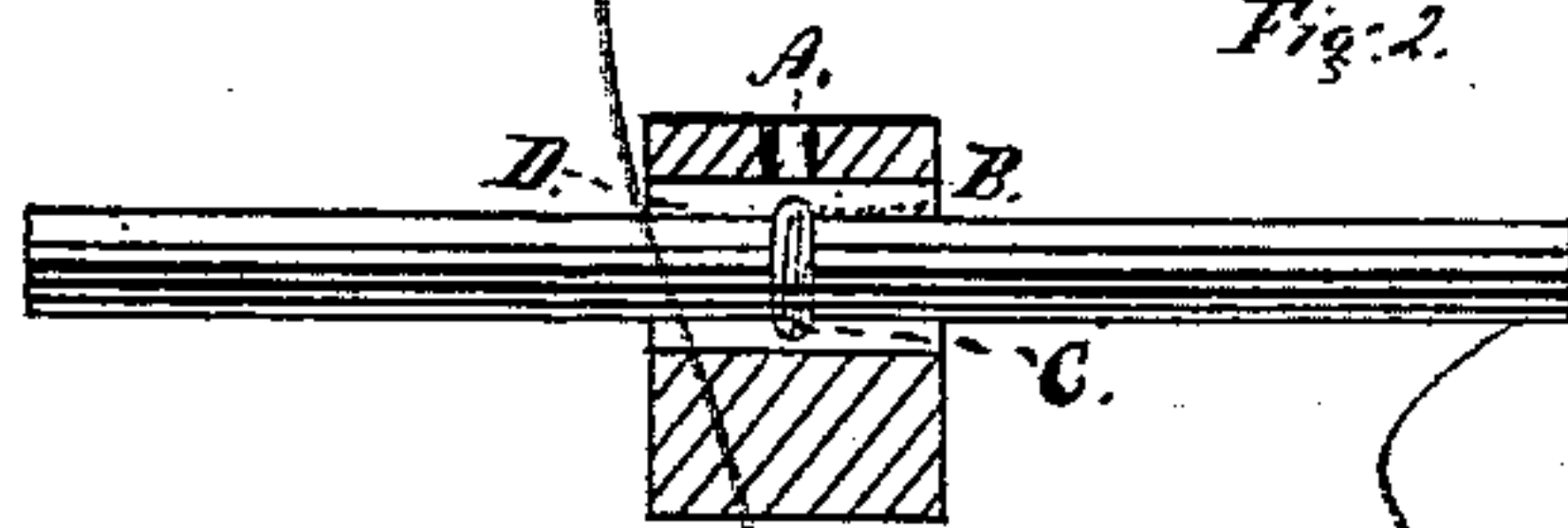


Fig. 2.

Section.



Witnesses.

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HERMANN KURTH, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN COMPOSITIONS FOR JOURNAL-BEARINGS.

Specification forming part of Letters Patent No. 148,615, dated March 17, 1874; application filed September 22, 1873.

To all whom it may concern:

Be it known that I, HERMANN KURTH, of the city of Milwaukee, State of Wisconsin, have invented an Improved Journal-Box, of which the following is a specification:

The object of my invention is to provide a journal-box for revolving axles or shafts, that will so far prevent friction and the generation of heat as to dispense with the use of either grease or oil for lubrication. This end is accomplished by means of a filling composed of a mixture of marine glass and iron ore, which adheres to the journal-box and fills its cavity, except a central space for the axle or shaft.

There is also a tightly-twisted wreath of sheep's wool, which is wound around the shaft and fits into a cavity in the filling.

The manner of preparing this box for use is as follows: Marine glass and iron ore are melted together in the proportions of two parts of glass to one of iron ore. While in a fused state the mixture is passed into the cavity of the journal-box through an opening, A. In order to keep the space for the shaft free, a mold of the same size is used, to be afterward removed. The box must be brought to a considerable heat, and the interior part brushed over with heated sulphuric acid. This

assists the adhesion of the mixture to the interior of the cavity, and prevents brittleness in the mixture. The mold is on the contrary to be brushed over with cold sulphuric acid, which will prevent the mixture from adhering to it. The mold also must be of such shape as to keep free a cavity, B, in the mixture at right angles to the shaft to receive the twisted wreath C. This twisted wreath C is made of sheep's wool, and is wound closely around the shaft and firmly attached to the box. By the use of this mixture, which, when cool, forms a solid coating, D, to the interior of the box, and of the wreath of sheep's wool wound around the shaft, friction is greatly lessened, and the heat generated by the motion absorbed.

The drawing is so simple that further explanation is unnecessary.

I claim as my invention, and desire to secure by Letters Patent, the following:

A bearing for journals, consisting of isinglass and iron ore melted together, substantially in the proportion specified, and in the manner described.

HERMANN KURTH.

In presence of—

T. NICHOLS,

S. B. RHODES.