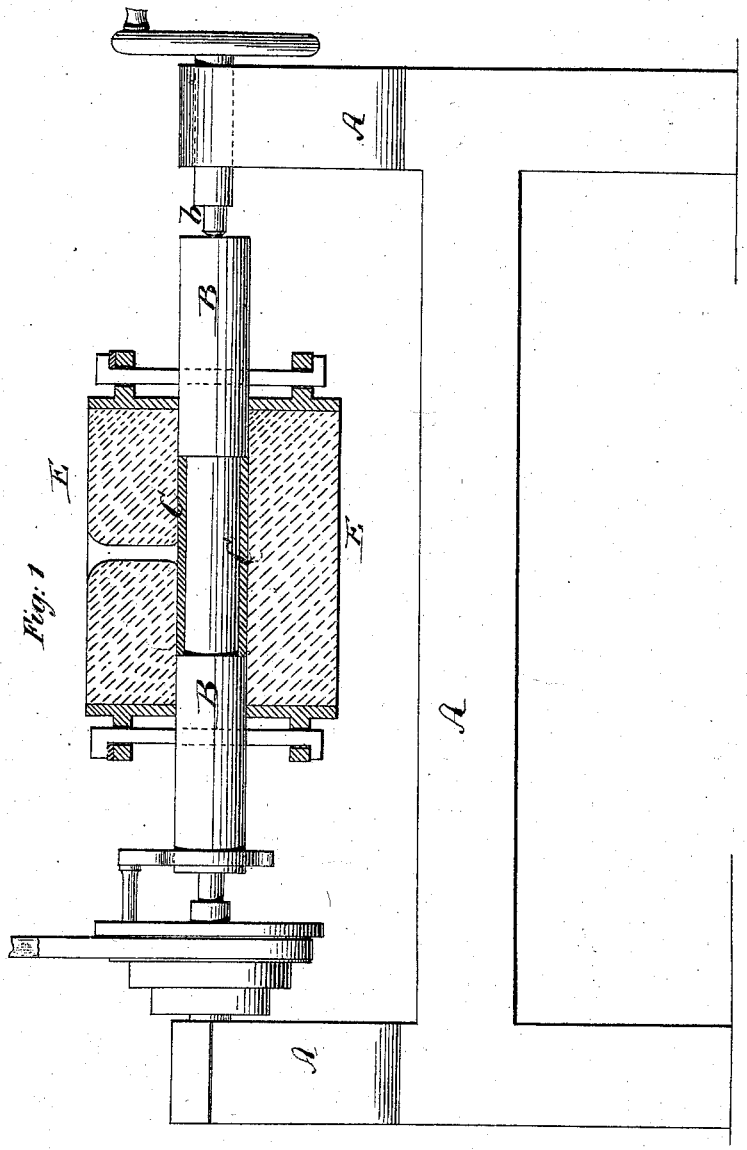
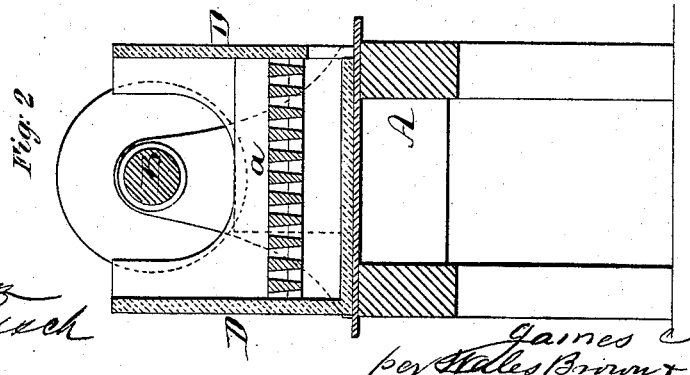
J. MILLER.

Processes for Casting Bearings on Shaftings.

No. 138,176. Patented April 22, 1873.





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UNITED STATES PATENT OFFICE.

JAMES MILLER, OF NEW YORK, N. Y.

IMPROVEMENT IN PROCESSES FOR CASTING BEARINGS ON SHAFTING.

Specification forming part of Letters Patent No. **138,176**, dated April 22, 1873; application filed February 17, 1873.

To all whom it may concern:

Be it known that I, JAMES MILLER, of city, county, and State of New York, have invented an Improved Method of and Apparatus for Casting Bearings and Sleeves upon Shafting, of which the following is a specification:

Figure 1 is a side elevation, partly in section, of my improved apparatus for casting bearings on shaftings; and Fig. 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to permit the convenient and even casting of brass or other bearings upon large or small shafts without injury to the latter; and the invention consists in casting such bearing upon a shaft while the same is being held in the lathe, thereby to prevent the injurious bending of the shaft, and also in the combination with such lathe and with the shaft rotating thereon of an apparatus for heating the same preparatory to the casting process.

In the accompanying drawing, the letter A represents the frame of the lathe; B, the shaft, held therein to receive the sleeve or bearing C. This shaft may either be new to receive its bearing, or it may, when old, be secured in the lathe to receive a new sleeve or bearing. D is a box containing a grate, *a*, and placed upon the lathe beneath that portion of the shaft which is to receive the casting for the purpose of heating the same previous to the application of the casting, it being necessary, as is well known, to heat such shafts before the brass casting is applied. During the heating process, which takes place as soon as the fire is built upon the grate *a*, the shaft is rotated with proper speed by means of the lathe, and as it commences to expand lengthwise under the influence of the heat, the back center *b* of the lathe is moved out to allow such expansion. E is a flask, made in two parts, of suitable construction, and placed, after the shaft has been heated and after the subsequent removal of the heating apparatus D from the lathe, around the shaft in manner indicated in Fig. 1, and properly supported on the lathe or shaft. After its application around the latter the process of casting can be carried on in the ordinary manner.

By the method herein described the shaft will be prevented from bending or shrinking, and from thereby becoming injured or made useless, and the bearing cast upon it will be firm and even and unobjectionable in every respect.

Claims.

1. The method herein described of casting bearings on shafts while the shafts are held in lathes, as set forth.

2. The combination of the heating apparatus D with the lathe A for the purpose of heating the shaft when in such lathe, as set forth.

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