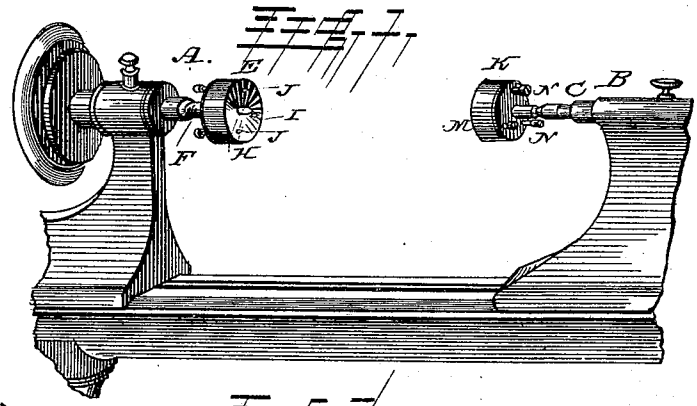
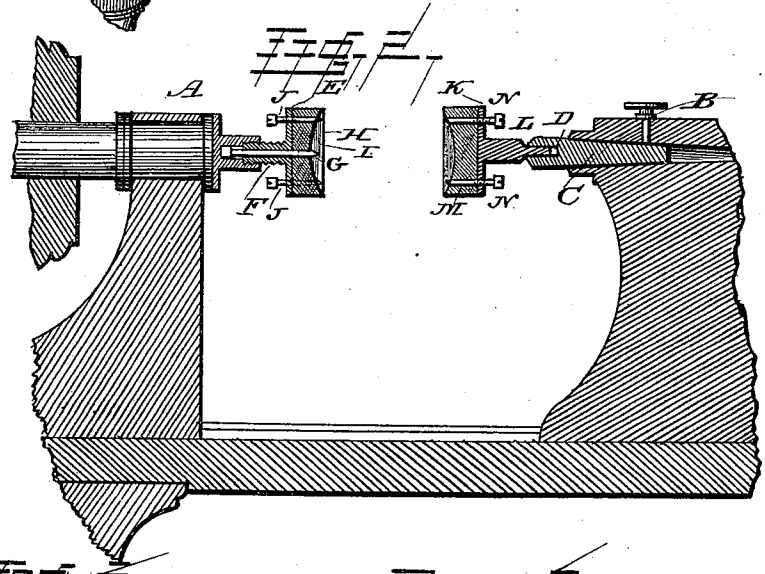
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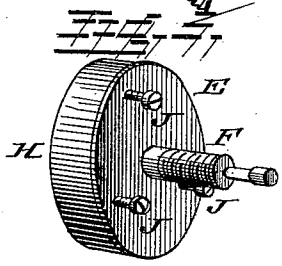
B. A. BARNES.

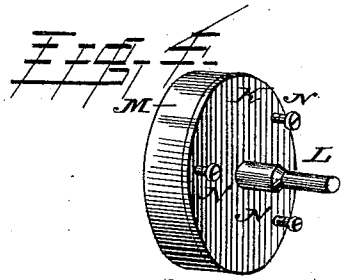
ATTACHMENT FOR LATHES.

No. 307,901. Patented Nov. 11, 1884.









WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN ANDREWS BARNES, OF OELWEIN, IOWA.

ATTACHMENT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 307,901, dated November 11, 1884.

Application filed March 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. BARNES, of Oelwein, in the county of Fayette and State of Iowa, have invented certain new and useful Improvements in Attachment for Lathes; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a portion of a watch-maker's lathe provided with my improved clutch-arbors. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a perspective view of the driving-disk, and Fig. 4 is a similar view of the driven disk.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to attachments for watch-makers' lathes or lathes for similar fine work; and it consists in the improved construction and combination of parts of so-called "clutch-arbors," adapted to clamp the work between them in the lathe, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the head-stock of the lathe, and B indicates the tail-stock, which has secured in it a socketed spindle, C, having the socket D in its end concentric with said spindle, and in line with the axis of the live-spindle.

E is a disk having a shank, F, projecting from the center of its back, which fits in the live-spindle or chuck, and the inner side or face of the disk has a central pointed pin, G, projecting through a facing-block, H, of cork, secured, by means of shellac or similar fastening means, to the face of the disk, and having its face I slightly concaved. A number of pointed screws, J, pass through the disk, turning in threaded perforations in the same, and through the cork arranged in a circle around the center of the disk, and may be brought to project with their points beyond the face of the cork. A disk, K, similar to the disk E, has a shank or spindle, L, projecting from its back, the outer reduced end of which spindle fits and turns in the socket in the end of the spindle C, and is provided with a cork facing, M, having its inner face concave, and with a circular set of screws, N, in the same manner as the disk upon the live-spindle. It will be seen that the work to be turned may be clamped between the cork facings of the disks, which facings will hold it firmly, and at the same time, by their yielding properties, prevent any undue strain upon the work, and the pointed spindle or center upon the disk upon the live-spindle will serve to center the work, while the pointed screws may be brought forward to assist to hold the work, or to fit the work where there is no solid center for the pointed center of the disk upon the live-spindle. It will also be seen that the cork facings will support delicate work while being turned, and prevent it from being broken or scratched by metallic points. It follows that the clutches may be used for any kind of work, as for holding emery-wheels, oil-stone wheels, diamond-wheels, or any polishing or grinding-wheels adapted to be used in a small lathe, the cork facings being sufficient to hold the wheels firmly clamped by friction.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a lathe for fine work, two clutching-arbors secured to the spindles, and having facings of cork, as and for the purpose shown and set forth.

2. In a lathe for fine work, two clutching-arbors attached to the spindles, and provided with cork facings having their faces slightly concaved, as and for the purpose shown and set forth.

3. In a lathe for fine work, the combination of a disk having a shank adapted to be secured in the live-spindle or chuck, and provided with a facing of cork having its face slightly concaved, and provided with a central pointed spindle passing through the cork facing, with a disk provided with a shank, fitting with its reduced end in a socket in the dead-spindle, and provided with a facing of cork having its face slightly concaved, as and for the purpose shown and set forth.

4. In a lathe for fine work, the combination of a disk having a shank adapted to be secured in the chuck or live-spindle, provided with a facing of cork having its face slightly concaved,

provided with a central pointed spindle passing through the cork facing, and having a number of pointed screws passing through the disk and through the cork, with a disk having a shank having its outer end reduced, provided with a facing of cork having its face concaved, and having a number of pointed screws passing through the disk and through the cork, and a spindle having a socket at one end for the reception of the reduced end of the spindle of the disk, and adapted to be secured in the tail-stock, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

BENJAMIN ANDREWS BARNES.

Witnesses:

A. A. EDGERTON,

PHIL KANE.