Hendrick & Jacobs,

Lathe Rest.

No. 26,988. Patented Jan. 31, 1860.

Fig. 2.

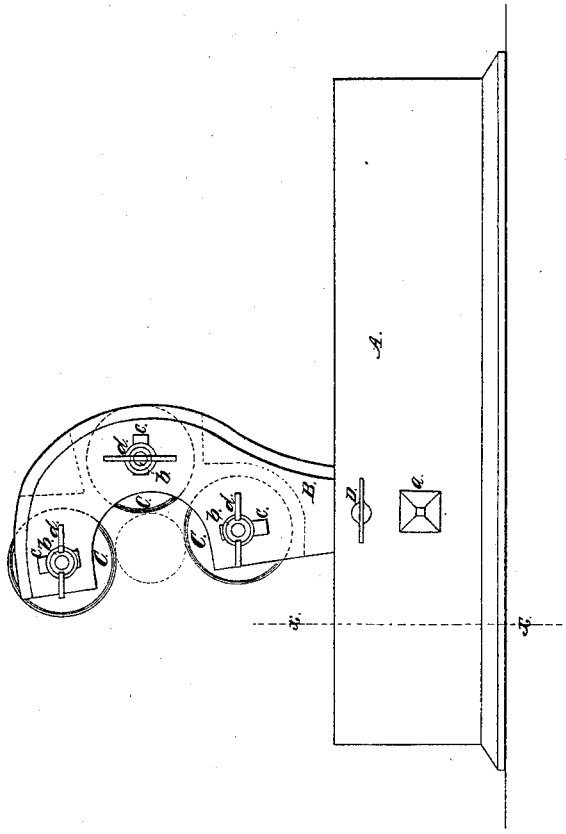
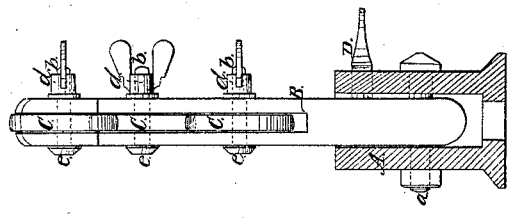


Fig. 1.



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UNITED STATES PATENT OFFICE.

WM. H. HENDRICK AND JOS. JACOBS, OF MOUNT VERNON, OHIO.

BACK-REST FOR LATHES.

Specification of Letters Patent No. 26,988, dated January 31, 1860.

To all whom it may concern:

Be it known that we, WILLIAM H. HENDRICK and J. JACOBS, both of Mount Vernon, in the county of Knox and State of Ohio, have invented a new, and Improved Back-Rest or Stay for Turning Lathes; and we do hereby declare that the following, is a full, clear, and exact description of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1, is a front view of our invention, the socket in which it is secured being bisected transversely as indicated by the line *x*, *x*, Fig. 2. Fig. 2, is a side view of ditto.

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

The object of this invention is to obtain a simple and more efficient device than has hitherto been employed for supporting work, while being turned so as to prevent any tremor of the same and effectually resist, the pressure of the tool on the work, thereby insuring the even or true turning thereof.

The invention consists, in having two or more rollers, placed in a curved arm or bar, and so disposed or arranged as to form a bearing for the work the lower end of the arm or bar being secured by a bolt in a socket, and fitted loosely on the bolt so that the device may be readily adjusted to and from the work as may be required, and secured in proper position to the work by a set-screw.

To enable those skilled in the art, to fully understand and construct our invention we will proceed to describe it.

A represents an oblong rectangular box, or socket, in which the lower part of a curved arm of bar B, is secured by a bolt *a*, the arm or bar being allowed to turn freely on the bolt *a*. The upper portion of the arm or bar is the curved part, and said curved portion is of semicircular form as shown clearly in Fig. 2. This curved portion of the arm or bar, is slotted vertically so as to form a recess or chamber to receive rollers C, which may be of equal diameter the peripheries of which rollers project beyond the concave edge of the arm or bar as shown clearly in Fig. 2. The rollers C, are fitted on shafts *b*, which pass through oblong slots *c*, in the arm or bar, the slots having such a position relatively with each other, as to admit of the rollers being adjusted nearer to or farther from a point which is the center of a circle of which the curved portion of the arm or bar is a part, and consequently it will be seen that the oblong slots *c* are placed in radial lines, from said point. The shafts *b*, of the rollers C, are secured in any part of the slots, *c*, by thumb nuts *d*, which are fitted on screw threads at one end of the shafts *b*, the opposite ends having heads *e*, on them.

Through one side of the box or socket A a set screw D passes. The inner end of this screw bears against the lower part of the arm or bar B, just above the bolt *a*, and a small hole may be made in the arm or bar to receive the inner end of the set screw D.

All the parts above described may be of metal, and the box or socket may be secured transversely, to the bed of the turning lathe, by any proper means. The work after being centered in the lathe and turned at about its center to a cylindrical or approximate form has the rollers C, fitted to it, one roller being above, one below, and the other at the back of the work, see Fig. 2, in which the work is shown in red. These rollers are adjusted so as to fit snugly to the work by loosening the thumb nuts *d*. The work is allowed to turn freely within the recess or bearing surfaces, formed by the rollers C, while the latter will perfectly sustain the work without marring it, and prevent all tremor of the same, and effectually resist, the pressure of the tool applied to it. After the work is first roughed-off, a perfect cylindrical portion may be turned for the rollers C, to bear against in order that the latter may serve as a perfect stay and insure the even or true turning of the work. When the work is completed, the arm or bar B, is thrown backward from the work, the set-screw D, being loosened, and the finished work is removed from the lathe, and another piece adjusted in it, to be operated upon and supported as before.

In turning long work of small diameter a bearing or support is essential.

Hitherto so far as we are aware a simple prop or stay has only been used bearing directly against the work and causing considerable friction. We believe that anti-friction supports or bearings have been used on automatic lathes, or those in which the cutting tools, are moved by a mechanism

operating conjointly with the other working parts of the lathe, but such supports or bearings have been arranged quite differently from ours, and were not capable of being applied to an ordinary turning lathe.

It would be preferable to have three rollers C, as they would form a perfect bearing; two rollers however might be used.

We do not claim broadly the employment or use of a back-rest or stay for turning lathes, irrespective of the construction, and arrangement herein shown and described, but

We do claim as new, and desire to secure by Letters Patent,

The curved arm or bar B provided with two or more adjustable rollers C, and secured at its lower part in a box or socket, A, substantially as and for the purpose set forth.

WM. H. HENDRICK.
JOSEPH JACOBS.

Witnesses:
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