J. M. ORAM.

Watchmakers' Lathes.

No. 143,458. Patented Oct. 7, 1873.

Fig. 1.

Fig. 2

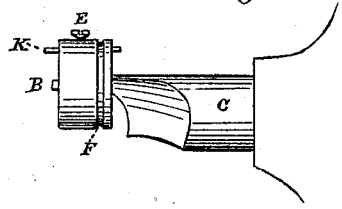


Fig. 4.

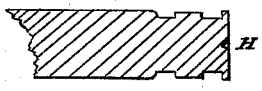
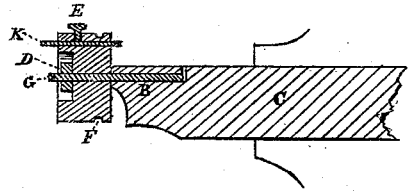


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN M. ORAM, OF GOSPORT, INDIANA.

IMPROVEMENT IN WATCH-MAKERS' LATHES.

Specification forming part of Letters Patent No. **143,458**, dated October 7, 1873; application filed January 12, 1872.

To all whom it may concern:

Be it known that I, JOHN M. ORAM, of Gosport, in the county of Owen and State of Indiana, have invented an Improvement in Lathes; and do hereby declare that the following description, taken in connection with the accompanying plate of drawings hereinafter referred to, forms a full specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to secure by Letters Patent.

My invention relates to that class of lathes which are made use of by watch-makers, known as watch-pivoting lathes; and the nature thereof consists in certain improvements in the details of the construction of the same, hereinafter described and shown.

In the accompanying plate of drawings, which illustrate my invention and form a part of the specification thereof, Figures 1 and 2 are front and side elevations of a lathe-head. Fig. 3 is a longitudinal vertical section of the lathe-head. Fig. 4 is a longitudinal vertical section of the lathe-center opposite the lathe-head.

The construction, operation, and relative arrangement of the component parts of my invention are as follows:

In the said drawings, letter A designates the lathe-head, made use of for the purpose of rotating staves, pinions, arbors, &c., while their pivots are undergoing the process of being turned, polished, or burnished, either on the sides or ends thereof. The said head A is cylindrical in form, and revolves upon the arbor B, rigidly attached to the lathe-center C. It is secured in position by the small frictional collar D countersunk within the same, for the purpose of giving as much length as possible to the cylindrical aperture through which passes the driving-arm K. The said driving-arm is longitudinally adjustable, and may be secured with any required portion of it projecting from the head by means of the set-screw E. F designates a groove cut upon the outer surface of the said head for the purpose of receiving the band by which the same is rotated.

Heretofore, in working pivots, split collets were made use of; one of the pivots was placed in the indentation G, while the other rested upon a notch upon the opposite center H, and rotation produced by means of a bow and string.

The advantages claimed for the present invention are, that the tension of the band from the motor comes on a part of the lathe and not upon the article that is being operated upon, so that all the pressure on the article is in a direction toward its axis of motion, thereby admitting of the reduction of a pivot to a much smaller diameter without liability of spring or break than when the split collet is used. The driving-arm can be quickly adjusted to pass between the arms of any wheel, notwithstanding the length of the arbor, staff, or pinion thereof, and communicate motion thereto while the pivots are being operated upon, thereby entirely dispensing with the use of split collets.

When a pivot is to be turned, polished, or burnished, no time is lost in fitting a collet and applying a bowhair, but wheel and staff have only to be placed in the lathe to be ready for action. It is not generally necessary to adjust the driving-arm K, except in cases in which pinions, staff, &c., are extremely long or short, the wheels generally being at some distance from the end of the staff, thereby permitting the said arm to reach beyond the wheel. The ends of pinions may be quickly reversed in the lathe, enabling the workman to operate on either pivot without the necessity of moving a split collet to the other side of the wheel. The pivot revolves in one direction continually, and with any degree of speed that may be required by the workman.

Having thus described my invention, I will indicate what I claim, and desire to secure by Letters Patent—that is to say:

The combination of the lathe-center C, lathe-head A, axle B, frictional collar D, and driving-arm K, all operating together as and for the purpose described.

In witness that I claim the foregoing I have subscribed my name hereto the 13th day of November, 1871.

J. M. ORAM.

Witnesses:
HENRY W. LEAS,
his
JOHN + HOWARD.
mark.