No. 771,736. PATENTED OCT. 4, 1904.

W. N. MANNING.

BACK REST FOR JEWELERS' LATHES.

APPLICATION FILED JAN. 29, 1904.

NO MODEL.

Fig. 1.

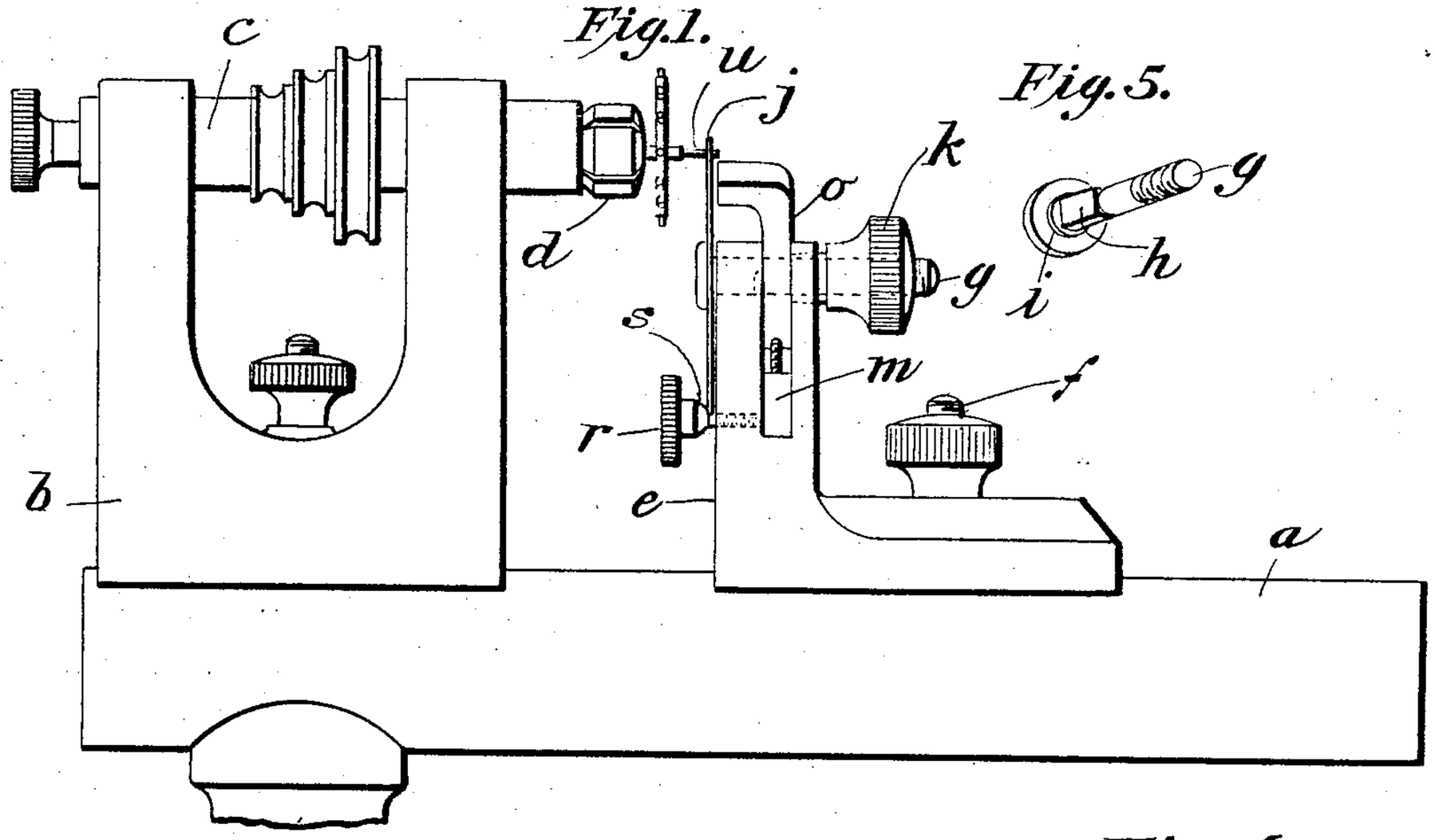


Fig. 5.

Fig. 2.

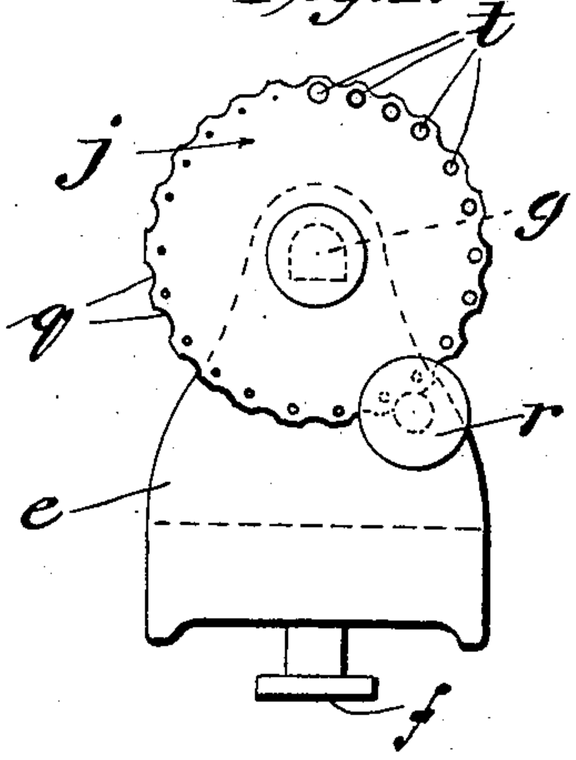


Fig. 3.

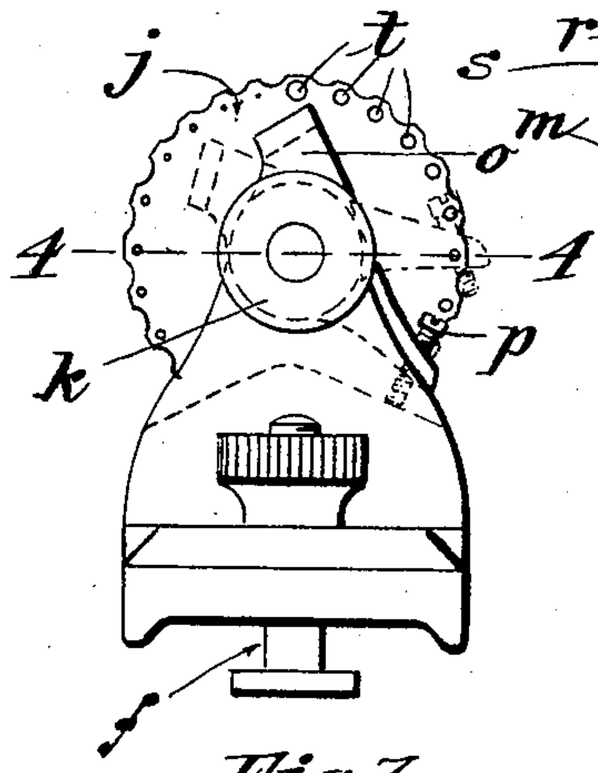


Fig. 4.

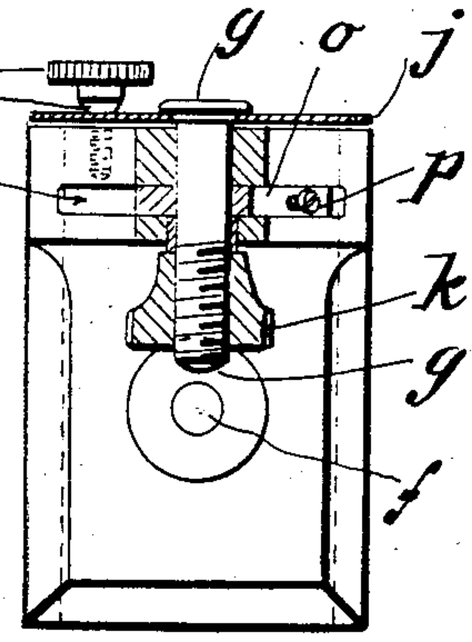


Fig. 6.

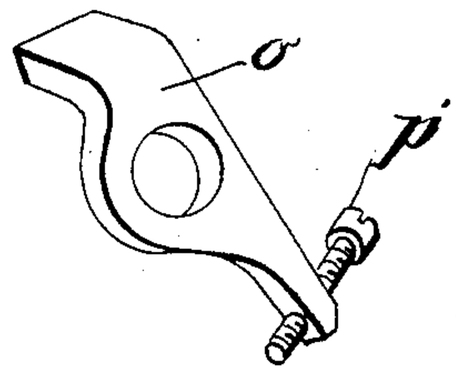
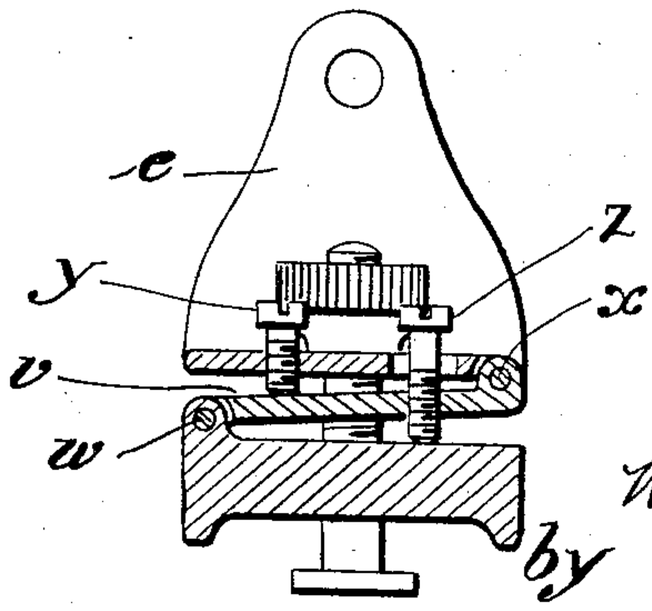


Fig. 7.



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No. 771,736. Patented October 4, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM N. MANNING, OF ROCKPORT, MASSACHUSETTS.

BACK-REST FOR JEWELERS' LATHES.

SPECIFICATION forming part of Letters Patent No. 771,736, dated October 4, 1904.

Application filed January 29, 1904. Serial No. 191,167. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. MANNING, a citizen of the United States of America, residing at Rockport, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Back-Rests for Jewelers' Lathes, of which the following is a specification.

This invention relates to watchmakers' tools, and specifically to a back-rest for watchmakers' lathes, the object of the invention being to provide an improved back-rest adapted to firmly support the delicate pivot-staffs close to the end thereof which is to be operated upon, the opposite end of the staff, as usual, being gripped in the chuck whereby it is rotated.

A further object of the invention is to provide means for accurately centering the staff-holding member of the device; and still another object is to provide an adjustable tool-rest whereby the work may be performed on the end of the staff in a proper manner.

The invention consists in the construction described in the following specification and clearly pointed out in the claims forming a part thereof, the invention being fully illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a part of a jeweler's lathe having this invention applied thereto. Fig. 2 is a face view of the back-rest. Fig. 3 is a rear view of the back-rest. Fig. 4 is a plan view, partly in section, the plane of the section being on line 4 4, Fig. 3. Fig. 5 is a perspective view of the bolt on which the rest-disk is supported. Fig. 6 is a perspective view of the adjustable tool-rest. Fig. 7 is a rear elevation, partly in section, of a vertically-adjustable back-rest.

Referring to the drawings, *a* may indicate the bed of a lathe; *b*, a head-stock provided with a spindle *c*, in the end of which is a chuck *d*. The back-rest consists of a sliding standard *e*, fitted in the usual manner to slide on ways on the bed of the lathe and secured thereto by a suitable device, as a bolt *f*, all of which is of the usual lathe construction.

In the vertical portion of the standard *e* and centrally thereof a bolt *g* extends horizontally through it from front to rear, the axis of the bolt lying in the vertical plane of the axis of the spindle *c*. Preferably this bolt is squared off, as at *h*, near the end thereof to hold it against rotation, the hole in the back-rest being similarly made to receive it. Under the head of the bolt a shoulder *i* is turned off to fit accurately the central perforation in the rest-disk *j*, and the bolt *g* is provided with a suitable nut *k*, whereby said disk may be clamped against the face of the standard. The vertical portion of said standard is provided with a slot *m*, extending transversely through it at right angles to the bolt *g*, and in this slot is the adjustable tool-rest *o*, adapted to swing in said slot on the bolt *g*. The upper portion of this tool-rest is bent substantially at right angles to the plane of the said slot and toward the rest-disk *j*, and through the opposite end thereof a screw *p* passes, the end of which bears against the bottom of the slot *m*. This screw by turning it in or out will adjust the opposite end of the tool-rest relative to the vertical center line of the disk *j*. The nut is adapted to secure the tool-rest *o* in its adjusted position, as well as to lock the rest-disk *j* in its adjusted position.

The rest-disk *j* has formed in the periphery thereof a series of index-notches *q*, and a thumb-screw *r* is located in the face of the standard *e* in such position that it may be screwed in toward the latter to effect the engagement of the tapered shoulder *s* thereon with one of the notches *q*. Midway between each two of the index-notches *q* the disk is perforated in a line parallel with the axis of the spindle *c*, these perforations *t* being of gradually-increasing diameter and comprising between the extremes of their diameters holes for the reception of any of the various staffs or pins of a watch.

In operating this device first find the hole in the index-plate of the proper size to receive the end of the piece to be operated upon—as, for example, the balance-staff of a watch, such as is shown in Fig. 1—then rotate the index-plate to bring the hole in position of alinement with the spindle, the thumb-screw *r* having been loosened for this purpose; and next turn up this thumb-screw to secure the index-

plate in its proper position. The tool-rest *o* can then be adjusted at the proper angle, and the index-plate and said rest may then be secured to the standard by turning up the nut *k*. Then slide the standard toward the head-stock far enough to cause the end of the staff to project through the disk-rest to a proper degree and secure it to the bed by the bolt *f*. In this manner the end of the staff *u* to be operated on may be so firmly supported back of that portion thereof on which the cut is to be made that the work to be done will be greatly facilitated, and the tool-rest, as constructed, permits of making adjustments adapted to any kind of a tool and any kind of an operation which must be performed on that end of the staff which projects through the disk *j*. If it is desired to use a file, the tool-rest *o* may be swung out of the way, as shown in dotted lines in Fig. 3, and by running the lathe backward filing can all be done on the under side of the staff, leaving the work in plain sight. It also leaves the end of the staff entirely unobstructed if it is desired to operate on the end of it, and by means of the index rest-disk the centering of that part of the work which is being operated on is assured.

To adapt the standard *e* to lathes of different swing, said standard may be made as shown in Fig. 7, wherein means are provided for effecting the vertical adjustment of the standard, said means consisting in providing a hinge construction on the base of the standard, as follows: The base of the standard *e* is divided horizontally, and between the two portions thereof is a flat plate *v*, one edge thereof being hinged, as at *w*, to one edge of the lower portion of the divided base and the opposite edge hinged, as at *x*, to the opposite side of the upper portion of the base. To adjust the standard vertically, the two screws *y* and *z* are provided, the latter being mounted in the plate *v* and bearing against the lower portion of the divided base and the screws *y* being mounted in the upper portions of the base, bearing against the plate *v*. It is thus possible by means of these two screws to elevate the standard *e* or to depress it to accommodate it to lathes of different swings and at the same time by the same means to level it accurately.

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

1. A back pivot-rest comprising a suitable standard movably supported on the bed of a lathe, a rotatable rest-disk provided with index-notches in its periphery and provided with holes equally spaced relative to said notches, a screw or analogous device having a tapered portion thereon to fit said index-notches, and means to lock said disk in an adjusted position, together with a tool-rest supported on said standard back of the rest-disk.

2. A back pivot-rest comprising a suitable standard, a rotatable rest-disk provided with index-notches in its periphery, there being holes through said disk equally spaced relative to said notches, said holes having progressively-increasing diameters, a screw on the standard to fit the index-notches, means located at the axis of the disk to secure the latter to the standard, together with a tool-rest adjustably supported on the standard back of the rest-disk.

3. A back pivot-rest comprising a suitable standard, a rotatable rest-disk provided with inlet-passages in its periphery, there being holes having progressively-increasing diameters extending through said disk parallel with its axis, said holes being equally spaced relative to said notches, together with a screw on the standard to fit the index-notches; a tool-rest pivotally mounted on the axis of said disk, and an adjusting-screw in said tool-rest, together with suitable means to secure the disk and the tool-rest immovably on the standard.

4. The combination in a watchmaker's lathe, of a head-stock, a spindle, and a work-holding chuck in the spindle, of a back pivot-rest comprising a rest-disk mounted rotatably thereon, there being holes through said disk near the edge thereof to receive the end of a piece of work to be operated on; suitable means to locate one of said holes in axial alinement with said spindle, a tool-rest adjustably mounted on the axis of the rest-disk, and means to secure the latter and said tool-rest immovably.

5. A back pivot-rest comprising a standard having a suitable base divided horizontally, a flat plate interposed between the two base portions and hinged respectively to opposite edges thereof, a screw in one of said base portions bearing on said plate, a second screw in said plate bearing on the other of said base portions, together with a rotatable rest-disk mounted on said standard provided with equally-spaced holes disposed near the edge of the disk to receive the end of a piece of work, there being equally-spaced index-notches between said holes, a screw to fit the index-notches, a tool-rest mounted on the standard back of the disk, and suitable means to secure the tool-rest and the disk immovably on the standard.

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