

A. MUIR.
TOOL REST FOR LATHES.

No. 493,041.

Patented Mar. 7, 1893.

Fig. 1.

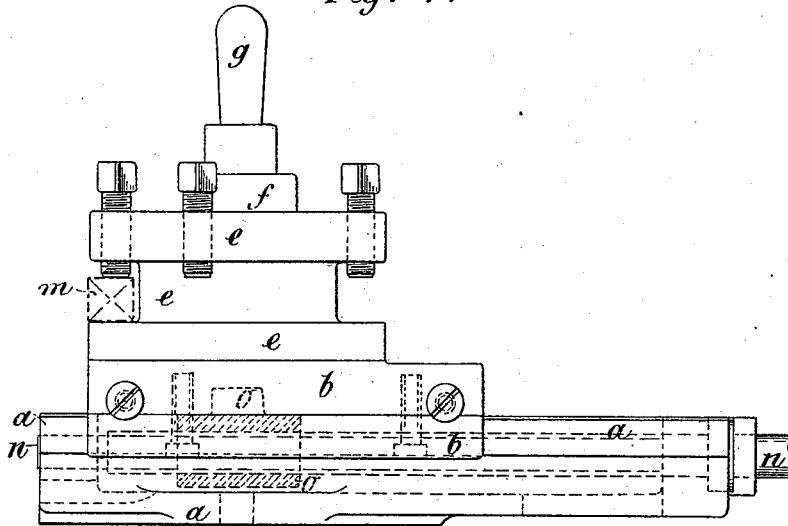


Fig. 4.

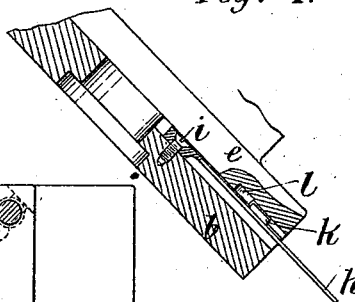
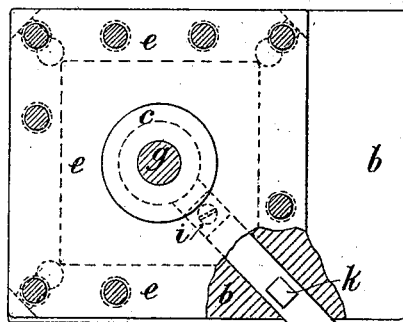


Fig. 3.



Witnesses

E. R. Bolton

D. J. Jones

Inventor:

Alfred Muir

Richardson & Co.

his Attorneys.

(No Model.)

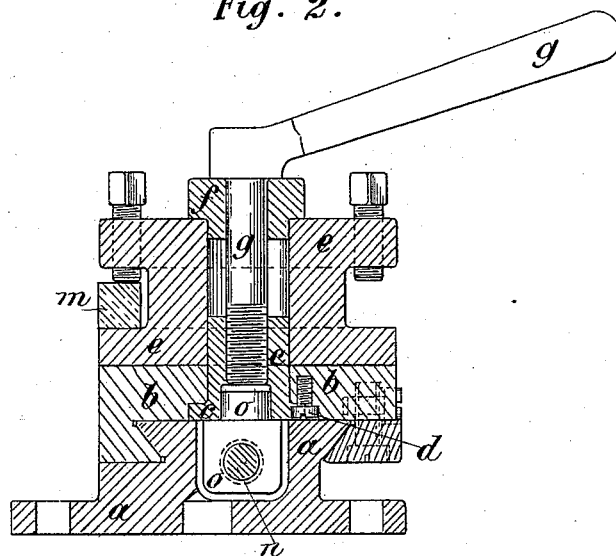
2 Sheets—Sheet 2.

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Fig. 2.



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UNITED STATES PATENT OFFICE.

ALFRED MUIR, OF MANCHESTER, ENGLAND.

TOOL-REST FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 493,041, dated March 7, 1893.

Application filed March 17, 1892. Serial No. 425,294. (No model.) Patented in England February 3, 1892, No. 2,082.

To all whom it may concern:

Be it known that I, ALFRED MUIR, a subject of the Queen of Great Britain, and a resident of Manchester, in the county of Lancaster, England, have invented certain new and useful Improvements in Tool-Rests for Lathes and other Machine-Tools, (for which I have obtained Letters Patent in Great Britain, numbered 2,082, bearing date February 3, 1892,) of which the following is a specification.

My invention relates to improvements in what are known as capstan rests for machine tools, and is particularly applicable to lathes, the chief objects of my invention being to enable ordinary turning or cutting tools to be held in such a rest and further to secure such tools more firmly than can be done in the ordinary capstan rest, and also to facilitate working close up to a faceplate or chuck to which the material to be machined may be secured.

In order that my invention may be fully understood and readily carried into effect I will describe the accompanying two sheets of drawings reference being had to the letters marked thereon.

Figure 1 is a side elevation of a capstan rest made according to my invention and fitted in slideways on a casting which may form a portion of a lathe or other machine tool. Fig. 2 is a transverse vertical section of Fig. 1. Fig. 3 is a plan view with the central bolt and some other parts omitted, and Fig. 4 is a detailed view of part of the capstan rest.

In the drawings,—*a* represents part of the carriage of a lathe or other machine tool to the slide of which the base *b* of my improved capstan rest is fitted; this base is of rectangular form, and it is bored out at or near its center to receive a flanged threaded nut *c* held in position by a screw *d*, the upper part *e* of the capstan rest is bored out to fit over the nut *c* and it is square in plan view so as to coincide with the square portion of the base *b*. A part of the rest *e* is cut away or recessed between the upper and lower portions so as to leave a space along each side to receive a turning or cutting tool of any convenient shape. A flanged collar *f* is fitted

into the hole in the rest *e* and its flange bears upon the top surface of the rest; this collar forms a guide for the main or hold-inn down bolt *g* which passes through it and screws into the nut *c* by which means the part *e* of the capstan can be securely clamped to the base *b*.

In order to regulate the rotary movement of the capstan a plate spring *h* is fixed by a screw *i* to the base *b* of the rest, see Figs. 3 and 4, and to this spring *h* is secured a stop piece *k*, which piece, when the rest is in any one of its determined working positions, lies in a recess *l* made to receive it at each corner on the underside of the moving part *e*.

A single turning or cutting tool *m* is shown in position in Fig. 2, it is however obvious that four or any smaller number of tools can be secured in the rest at the same time; to clamp the rest ready for work the handle of the locking bolt *g* must be turned so as to bind the upper part *e* to the base *b* of the capstan rest.

In order to swivel the rest the bolt *g* is slackened and the plate spring *h* depressed to release the stop piece *k*, the rest can then be moved in either direction until the desired tool guided by the stop piece *k* coming into one of its recesses *l* reaches its working position when the handle of the locking bolt *g* is moved to clamp the rest ready for work again. If required the rest could be clamped for working at any intermediate point between two of the recesses *l*.

By means of the screw *n* in the slide *a* and the nut *o* connected to the base *b* of the rest, the latter can be readily traversed along the slide.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim, and desire to secure by Letters Patent of the United States, is—

In combination, the carriage, the base *b*, fitted thereto and having a central opening, a flanged nut *c*, secured in said opening and extending above the base, the rest *e*, having a central opening adapted to the upper pro-

jecting part of the nut *c*, and seats about its
sides for the tools, the collar *f*, at the upper
end of the opening in the rest the clamping
screw *g*, passing through the said collar and
5 into the nut *c*, and the spring arm stop be-
tween the rest and base, substantially as de-
scribed.

In witness whereof I have hereunto set my
hand in presence of two witnesses.

ALFRED MUIR.

Witnesses:

H. B. BURLONG,
HERBERT R. ABBEY.