W. A. PATRICK.

Turning Lathe.

No. 27,149. Patented Feb. 14, 1860.

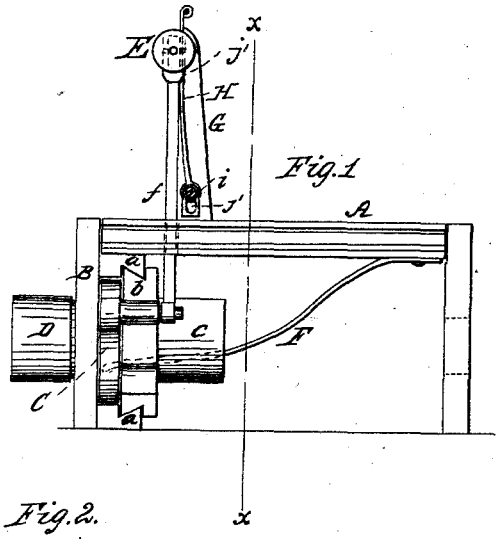
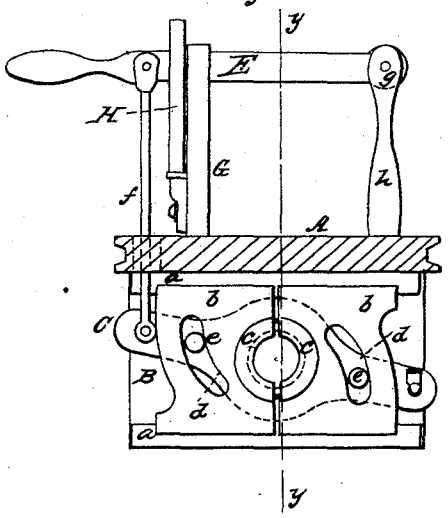


Fig. 1

Fig. 2.



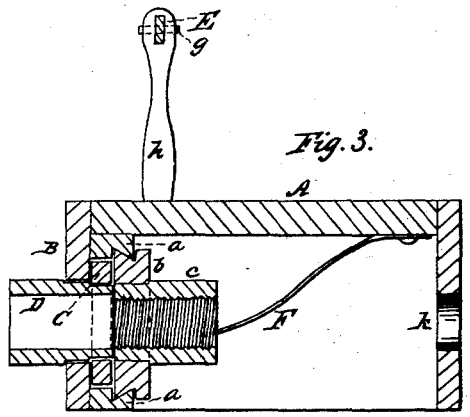


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

W. A. PATRICK, OF LUDLOW, VERMONT.

METHOD OF OPERATING FEED-NUTS IN LATHES.

Specification of Letters Patent No. 27,149, dated February 14, 1860.

To all whom it may concern:

Be it known that I, W. A. PATRICK, of Ludlow, in the county of Windsor and State of Vermont, have invented a new and useful Improvement in Operating the Adjustable Nuts of the Feed Mechanism of Turning-Lathes; and I 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 side view of my invention detached from a lathe. Fig. 2, a transverse vertical section of ditto, taken in the line *x*, *x*, Fig. 1. Fig. 3, a longitudinal vertical section of ditto, taken in the line *y*, *y*, Fig. 2.

This invention relates to an improved means for operating or adjusting the two parts of a divided nut, so that the same may be made to engage with or be disengaged from the feed screw which, when the nut is engaged with it gives the feed movement to the carriage containing the knife.

The object of the within described invention is to obtain a simple and efficient mechanism for the intended purpose, one that may be readily operated, not liable to be deranged or rendered inoperative by use, and one that can be retained in the two positions necessary to keep the nut in an open and closed state, and also due provision made for wear.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a carriage or rest which is fitted between suitable guides connected with a lathe as usual. This carriage may be of usual construction and therefore does not require a minute description. The knife also is attached to this carriage and arranged in the ordinary way.

B, represents a vertical plate attached to one end of the carriage A. This plate has dovetail guides *a*, *a*, attached to its inner sides, one at its top and the other at its bottom. Between these guides *a*, *a*, two plates *b*, *b*, are placed or fitted and allowed to slide freely. To these plates *b*, *b*, the sections *c*, *c*, of the nut are attached one to each. The sections *c*, *c*, are longitudinal halves and they project outward at right angles from the plates *b*, *b*. Each plate *b*, has a curved slot *d*, made in it into which slots pins *e*, *e*, are fitted. The shape of the slots *d*, *d*, is shown clearly in Fig. 2.

Between the plate B, and the plates *b*, *b*, there is placed a yoke C, to which the pins *e*, *e*, are attached. This yoke works on a screw guide D, which is a short tube fitted in the plate B, and one end of the yoke is connected by a rod *f*, to a hand lever E, the fulcrum *g*, of which passes through the upper end of an upright *h*, on the carriage A. The opposite end of the yoke C, has a spring F, attached to it, which spring has a tendency to keep the two sections *c*, *c*, of the nut separated or in an open state.

To the upper surface of the carriage A, an upright G, is attached. This upright has a vertical spring H, secured to one side of it, said spring being secured at its lower end to the upright by means of a screw *i*, which passes through an oblong slot *j*, in the lower part of the spring, as shown clearly in Fig. 1. At the upper part of the spring H, at one side opposite the lever E, there is a ledge or lateral projection *j'*, which serves as a support for the lever E, when the latter is raised to its fullest extent. The screw (not shown) passes through the guide D, between the two sections *c*, *c*, of the nut and through a guide *k*, in a plate *l*, attached to the carriage. This plate *l*, serves as a guard and prevents shavings and foreign substances coming in contact with the nut.

The operation will be readily seen:—When the carriage A, is to be operated, the attendant raises the lever E, which, through the medium of the rod *f*, actuates the yoke C, the latter in consequence of its pins *e*, *e*, fitting in the curved slots *d*, *d*, of the plates *b*, *b*, shoves the sections or parts *c*, *c*, of the nut toward each other and causes the same to fit snugly to the screw. When the nut is to be disengaged from the screw, the spring H, is so actuated as to cause the ledge or projection *j'*, to be thrown out from underneath the lever and the spring F, immediately throws upward the end of the yoke to which it is attached and thereby separates the sections *c*, *c*, of the nut and disengages the same from the screw.

In case the sections *c*, *c*, of the nut become worn, or in case of the wearing of the screw, the spring H, may be adjusted vertically to compensate for said wear by releasing screw *i*, the spring and consequently the ledge or projection *j'*, being raised in proportion to

the wear and thereby admitting of a greater elevation of lever E, and a closer adjustment of the nut and screw.

Having thus described my invention what I claim as new and desire to secure by Letters Patent, is,

The yoke C, connected with the hand lever E, and spring F, and also connected with the sliding plates *b*, *b*, of the sections *c*, *c*, of the nut by means of the pins and slots *e*, *e*, *d*, *d*, the whole being arranged to operate as and for the purpose set forth.

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Witnesses:
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