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S. A. LEE

TOOL HOLDER

Filed March 17, 1923

Fig. 1.

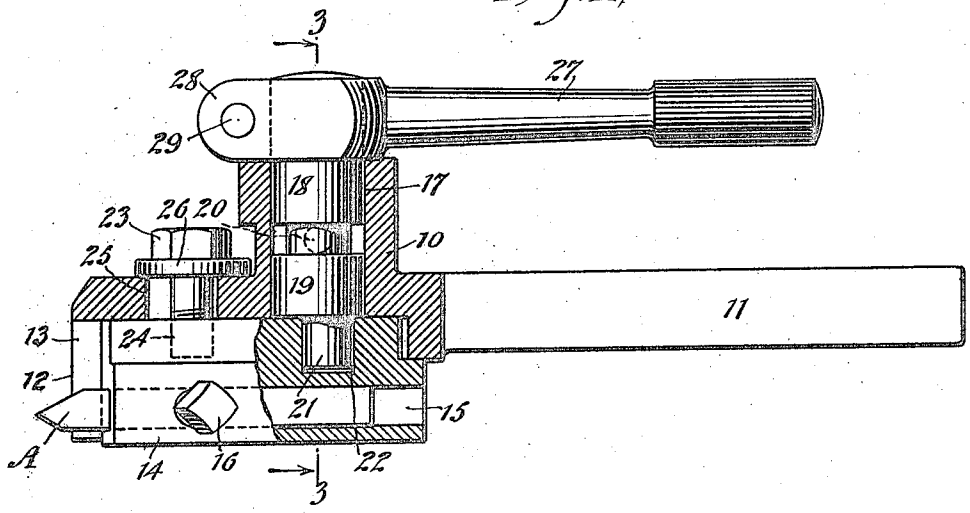


Fig. 2.

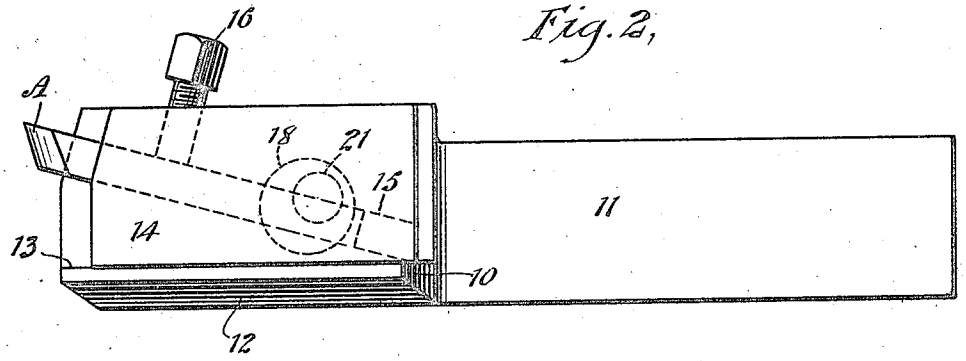
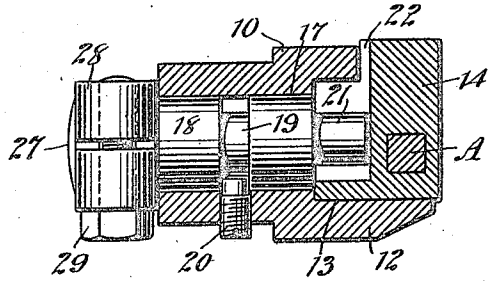


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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TOOL HOLDER.

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To all whom it may concern:

Be it known that I, SAMUEL A. LEE, a citizen of the United States of America, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Tool Holder, of which the following is a description.

My invention relates to tool holding means for lathes and adapted to be mounted on the tool post. The invention has for its general object to provide a tool holder of the indicated character having novel means for readily adjusting the extent of projection of the cutting tool from the holder.

The nature of the invention and its distinguishing features and advantages will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of one example of the invention.

Figure 1 is a sectional plan view of a tool holder embodying my invention;

Figure 2 is a side elevation thereof;

Figure 3 is a cross section as indicated by the line 3—3, Figure 1.

In carrying out my invention in accordance with the illustrated example a head 10 is provided having a lateral shank 11 adapted to be adjusted in the tool post of the lathe (not shown). At one side the bottom of the head 10 extends sidewise to form a horizontal flange 12, the upper surface 13 of which forms a seat for the tool carrier block 14 formed with an oblique recess or through-bore 15 to receive the tool A, said tool being made fast in adjusted position in the recess 15 by a set screw 16.

Transversely in the head 14 is formed a bore 17 which receives and forms a bearing for a tool shifting element round in cross section. Said element has a reduced diameter approximately central thereof to form an annular groove 19 into which groove is projected transversely of the element 18 a screw plug 20 threaded into the head 10. The screw plug 20 protrudes into the annular groove 19 and thereby prevents longitudinal displacement of the element 18. On the element 18 at the inner end is an eccentric pin 21 which is accommodated in a recess 22 in the inner side of the tool holding block 14, said recess 22 being advantageously in the form of a slot extending through the top of the block 14.

With the described construction the turning of the element 18 about its own axis will through the medium of the eccentric pin 21 cause the block 14 to advance or recede, thereby projecting the tool A in said block to a greater or less extent beyond the front end of the head 10.

To limit the rectilineal adjusting movement of the block 14 suitable means may be provided, there being shown for the purpose a lateral screw bolt 23 engaging in a tapped hole 24 in the inner side of said block 14. The bolt 23 extends through an oblong slot 25 formed in the head 10, the walls of which slot limit the movements of the bolt 23 either forward or back, thereby limiting the rectilineal movement of the block 14.

The bolt 23 has a flange or collar 26 thereon to overlap the material of the head 10 at the slot 25, thereby covering said slot.

For rocking the element 18 about its own axis for the adjustment of the tool holding block 14 I advantageously employ a handle lever 27 here shown as secured to the element 18 through the medium of a split clamp head 28 integral with said handle, the clamping being completed by a screw bolt 29 threaded into the members of said split head 28.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. A tool holder for lathes comprising a head having means to mount the same in position for use, a block having means to receive a tool and mounted to have rectilineal movement on said head to regulate the degree of projection beyond the head, a transversely disposed element having a bearing in said head, an eccentric pin on said element engaging said block, and means to turn said element to cause said pin to move said block.

2. A tool holder for lathes comprising a head having means to mount the same in position, a block having means to receive a

tool and mounted to have rectilineal movement on said head to regulate the degree of projection beyond the head, a transversely disposed element having a bearing in said head, an eccentric pin on said element engaging said block, and means to turn said element to cause said pin to engage and move said block; together with means carried by said block and having limited movement in said head to constitute a stop for limiting the movement of said head back or forth.

3. A tool holder of the class described including a head, means to support said head for positioning the holder for functioning, slidable means adapted to accommodate a tool, an element adapted to turn in said head and disposed transversely to said tool holding means, an eccentric pin on said element engaging the tool holding means to actuate the same, and a lever handle on said element for optionally turning the same to give movement to said tool holding means.

4. A tool holder of the class described comprising a head having means to mount the same, a lateral member on said head presenting a seat at its upper surface, a slide block on said seat and having means to hold a tool, said slide block having a slot in the inner face thereof, and a manually operable turnable element having an eccentric pin extending into said slot.

SAMUEL A. LEE.