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H. G. MAGEALSON

2,455,076

SINGLE CONTACT DIAL INDICATOR

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Fig. 1.

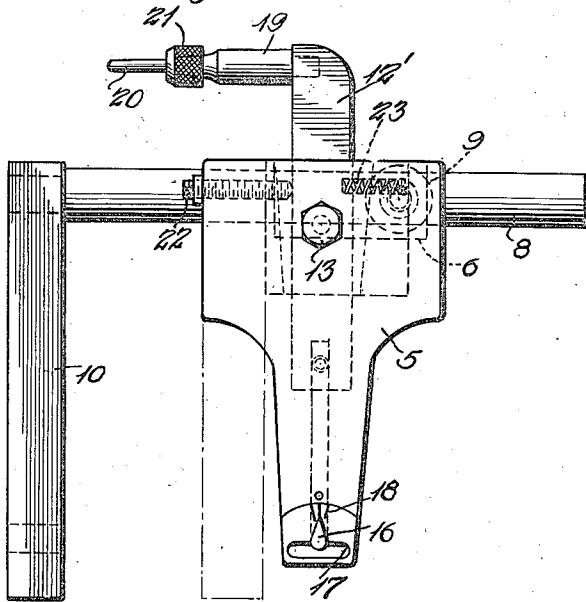


Fig. 2.

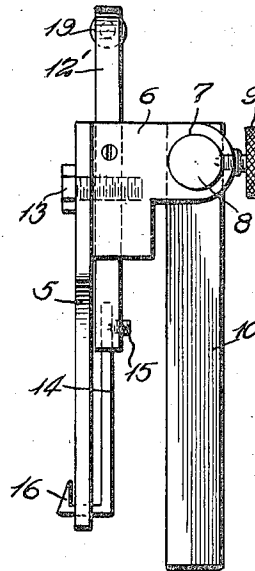
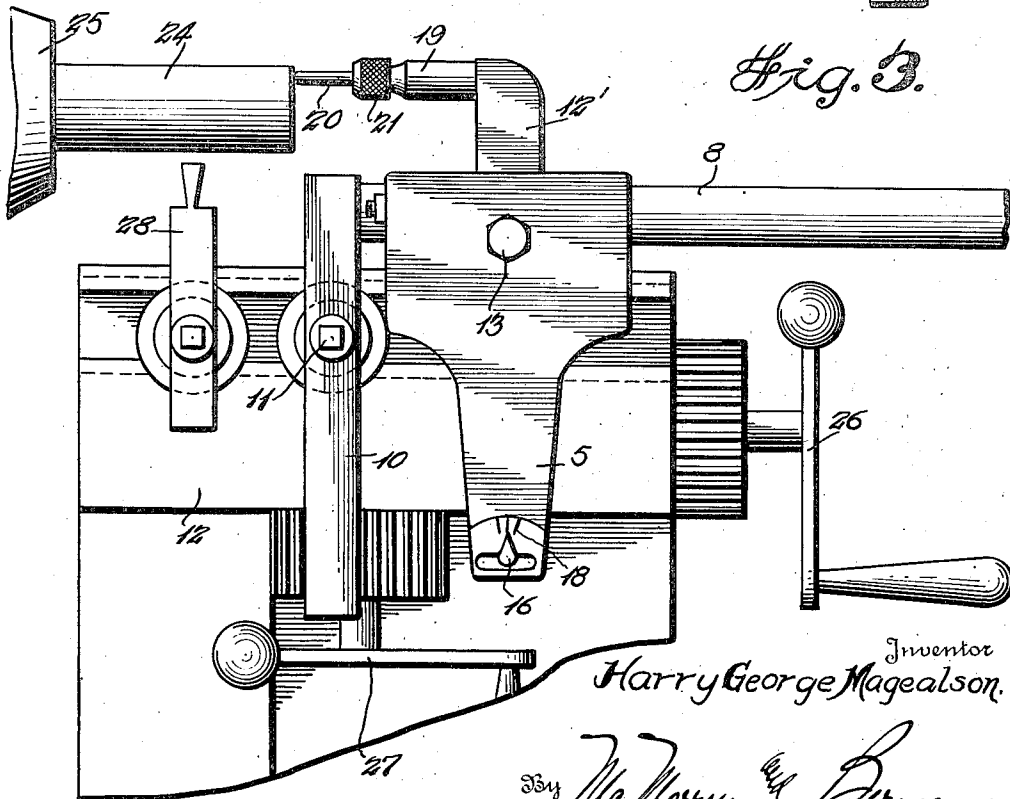


Fig. 3.



Inventor
Harry George Magealson.

By *McMurray & Brown*
Attorneys

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SINGLE CONTACT DIAL INDICATOR

Harry G. Magealson, Kokomo, Ind.

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3 Claims. (Cl. 33-172)

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The present invention relates to new and useful improvements in indicators designed for use with lathes to indicate the proper position or adjustment of the cut-off tool carried by the lathe compound for cutting grooves or similar operations in stock, or for cutting off predetermined lengths of the stock.

An important object of the present invention is to provide an indicator of this character embodying means for attaching the same to a lathe compound for movement therewith and embodying a contact finger adapted for movement into engagement with the end of the stock to indicate when the compound and cutting tool carried thereby has been properly adjusted relative to the stock and in which the contact finger is moved laterally away from the stock as the cutting thereof progresses in order not to interfere with the piece cut from the stock.

A further important object of the invention is to provide an indicator attachment for lathes of this character adapted to be secured in position to the lathe compound by one of the tool posts forming part thereof.

A still further object is to provide a device of this character of simple and practical construction, which is efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a front elevational view of the indicator,

Figure 2 is a side elevational view thereof, and

Figure 3 is a front elevational view showing the indicator attached to the lathe compound.

Referring now to the drawing in detail wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates an indicator plate having a pair of rearwardly extending spaced apart ears 6 provided with aligned openings 7 for slidably mounting the plate on a bar 8 and secured in longitudinally adjusted position on the bar by means of a set screw 9.

To one end of the bar 8 is attached an arm 10 adapted for supporting the present invention on one of the tool posts 11 of a lathe compound 12 of conventional construction.

The plate 5 is spaced forwardly of the rod 8 as

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will be apparent from an inspection of Figure 2 of the drawing and an indicating arm or lever 12' is pivoted at the rear of the plate on a pin or bolt 13.

An extension 14 is secured to the lower end of the arm 12 by means of a set screw 15, the lower end of the extension being formed with a pointer 16 projecting through a slot 17 in the lower end of the plate and cooperating with a scale 18 marked on the front surface of the plate.

Secured to the upper end of the arm 12 is a horizontally extending pin 19 to the threaded end of which is attached a contact finger 20. The contact finger 20 has an end portion embracingly supported in a threaded sleeve 21, the sleeve 21 being movable into threaded engagement with the threaded end of the pin 19 to thereby adjustably attach the contact finger 20 to the pin 19.

A stop pin 22 is threaded through one of the ears 6 in the path of the forward movement of the upper end of the arm 12 to limit forward movement thereof and a coiled spring 23 has one end recessed in the rear edge of the arm 12 and its other end bearing against the other of the ears 6, the spring yieldably restraining rearward movement of the arm and maintaining the arm in a perpendicular position as indicated in Figure 1 of the drawing.

In the operation of the device, with the arm 10 secured to the post 11 of the lathe compound the contact finger 20 projects forwardly in a direction for contacting the rear end of the stock 24 secured in the lathe head stock 25. The compound is adjusted forwardly by the handle 26 to move the contact finger 20 into a position for touching the end of the stock, the slightest pressure of the finger against the revolving stock being sufficient to move or vibrate the pointer 16 whereupon the proper setting of the compound may be indicated.

The handle 27 is then manipulated to adjust the lathe compound 12 in a direction for moving the cutting tool 28 into engagement with the side of the stock whereupon a groove may be cut annularly in the stock at a desired distance inwardly of the end of the stock, or the end of the stock may be cut off. As the tool 28 cuts into the stock the contact finger 20 will be moved laterally of the stock and out of contact with the end thereof so as not to interfere with the falling off of the cut off end of the stock.

Any easily detected deviation from the vertical position of the pointer 16 will indicate that the lathe compound has not been properly adjusted on the stock and thus indicate the necessity for

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further adjusting the compound before the cutter is moved into cutting position.

In view of the foregoing description taken in conjunction with the accompanying drawing, it is believed that a clear understanding of the construction, operation and advantages of the invention will be quite apparent to those skilled in the art. A more detailed description thereof is accordingly deemed unnecessary.

It is to be understood, however, that even though I have herein shown and described a preferred embodiment of my invention, that the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described, and the scope of the appended claims.

Having thus described the invention, what I claim is:

1. An indicator for a lathe of the type including a lathe compound adapted to carry a cutting tool and having longitudinal and transverse feeding means and also including a lathe head stock adapted for holding work thereon, said indicator comprising a plate having spaced apertured ears extending in a plane transversely to the plane of the plate, means extending through the ears and adjustably secured therein and attached to the compound for movement therewith, a lever pivoted to the plate between the ears, said pivot being intermediate of the ends of said lever thereby forming an upper and a lower arm, a pin mounted on the extremity of said upper arm at right angles thereto, a contact finger adjustably attached to the pin for contacting the work, said lower arm having a forwardly-projecting portion attached to its extremity, an upstanding pointer on this forwardly-extending portion, a lower part of the plate having an opening for receiving the forwardly-projecting portion of the lower arm, a scale for the pointer on the front face of the plate and above the opening, an adjustable stop mounted in an ear and engaging one side of the upper lever arm, and a spring engaging the other side of said lever arm and re-acting against the other ear.

2. An indicator for a lathe of the type including a lathe compound adapted to carry a cutting tool and having longitudinal and transverse feeding means and also including a lathe head stock adapted for holding work therein, said indicator comprising a plate attached to the compound for movement therewith, a lever arranged in

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superposed relation with respect to said plate and pivoted to the latter at a point between its sides, the pivot point being intermediate of the ends of said lever thereby forming an upper and a lower arm, a pin mounted on the extremity of said upper arm at right angles thereto, a contact finger adjustably attached to the pin for contacting the work, said lower arm having a forwardly-projecting portion attached to its extremity, an upstanding pointer on this forwardly-projecting portion, a lower part of the plate having an opening for receiving the forwardly-projecting portion of the lower arm, and a scale for the pointer on the front face of the plate and above the opening.

3. An indicator for a lathe of the type including a lathe compound adapted to carry a cutting tool and having longitudinal and transverse feeding means and also including a head lathe stock adapted for holding work therein, said indicator comprising a plate attached to the compound for movement therewith, a lever arranged in superposed relation with respect to said plate and pivoted to the latter at a point between its sides, the pivot point being intermediate of the ends of said lever thereby forming an upper and a lower arm, a pin mounted on the extremity of said upper arm at right angles thereto, a contact finger adjustably attached to the pin for contacting the work, said lower arm having a forwardly-projecting portion attached to its extremity, an upstanding pointer on this forwardly-projecting portion, the lower part of the plate having an opening for receiving the forwardly-projecting portion of the lower arm, a scale for the pointer on the front face of the plate and above the opening, and a stop on said plate and engaging one side of the upper lever arm for limiting the forward movement of the latter.

HARRY G. MAGEALSON.

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