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GAUGE FOR DISK GRINDERS

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This invention relates to disk grinding machines commonly called disk grinders and has for its object a particularly simple, efficient and readily operated means for accurately determining the position of the work support relatively to the grinder in order that the disks may be ground accurately to a predetermined size.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a fragmentary plan view of a disk grinder embodying my invention.

Figures 2 and 3 are respectively sectional views on lines 2—2 and 3—3, Figure 1.

The grinder, that is, the machine comprises, generally, a grinder or wheel 1 suitably supported on a frame 2 to rotate about its axis and a table 4 arranged in juxtaposition to the face of the grinder. The table is usually formed with a guide or way 5 therein parallel to the face of the grinder, and a slide 6 is located in the way and carries the work support and also the stop or gauge for the work support. The disks as wooden disks are first cut to approximately the size desired and then ground accurately to size. The support for the disk or work 7 is in the form of a lever 8 which is slidably pivoted at 9 to a vertically arranged pivot on the slide 6, the lever extending at an incline to the plane of the face of the grinder and toward the face of the grinder and carrying a suitable spindle or point 9 on which the disk 7 is mounted.

The lever is preferably formed with an angular end portion 10 in order that the main portion of the lever may have a comparatively great incline, the incline being desirable in order to obtain a fine adjustment by the gauge.

The gauge or adjustable stop is in the form of a lever 11 pivoted at 12 to the slide 6, the pivot 13 being arranged the same distance from the face of the grinder as the pivot 9 of the work supporting lever 8. The lever 11 extends between the lever 8 and the grinder and inclines in the same general direction as the work supporting lever 8. It is formed with an angular end portion 13 extending toward the lever 8 to engage at its end with the upper edge of the lever 8. The gauge lever 11 is adjustable in different radial positions to shift its vertically arranged end 14 into different positions relatively to the lever 8 and it is held in its adjusted position by a wing nut 15 threading on the pivot pin 12 against the lever 11 or the hub thereof. The pivot pin 12 screws into the slide 6 and is in practical effect a threaded stud on which the wing nut 15 turns.

In operation, the disk as before stated, is first cut to approximate size or a size illustrated by the circle A and the size to which it is to be ground is illustrated by the circle B. The gauge 11 is set to engage and stop the movement of the lever 8 toward the grinder when the grinder grinds down to the circle B. It is so set by merely loosening the wing nut 15 and swinging it to the desired position and then tightening the nut 15. When the gauge lever 11 is once set for the particular size of disk, all other disks of the same size can be accurately ground without striking the circle B thereon, by simply placing the wood to be cut on the spindle 9 and forcing the lever 8 with one hand toward the grinder 1 until it contacts with end 14 of the lever 11 and then turning the wood in a complete circle with the other hand.

This gauge lever 11 is particularly advantageous in that it can be quickly and accurately adjusted in the desired position without any further adjustments being made to the work support or lever 8 and by means of the gauge in the form of a lever, the work support needs but one center on which to mount the work instead of a plurality of centers for different sizes of disks.

What I claim is:

1. In a disk grinding machine, the combination of a table, a grinder arranged in juxtaposition to the table, a work support for holding a disk to be ground movable toward and from the grinder and a pivoted gauge for limiting the movement of a support toward the grinder, the gauge being adjustable about its pivot, said work support being piv-
oted and movable about its pivot toward and
from the grinder and the gauge comprising
an arm extending between the work support
and the grinder and having an angular end
arranged to engage the pivoted work support
and means for holding the gauge from piv-
otal movement.

2. In a disk grinding machine, the com-
bination of a grinder, a table arranged in
juxtaposition to the grinder, a work support
in the form of a lever pivoted and extending
at an angle to the plane of the working face
of the grinder and movable on its pivot to-
ward and from the grinder, a pivoted gauge
in the form of an arm extending between the
lever and the grinder and inclining in the
same general direction as the work support-
ing lever to engage and limit the movement
of the lever and means for holding the gauge
in its adjusted position.

3. In a disk grinding machine, the com-
bination of a table, having a longitudinal
groove therein, a grinder arranged in juxta-
position to the table, a bar slidable in said
groove, a lever pivotally mounted at one end
on said bar and movable about its pivot to-
ward and from the grinder and provided
with a spindle at its free end for holding a
disk to be ground, a gauge comprising a lever
pivotally mounted on said bar and having an
angular end arranged to engage said first
mentioned lever between said lever and said
grinder, and means for holding said last men-
tioned lever from pivotal movement.

4. In a disk grinding machine, the com-
bination of a table having a longitudinal
groove therein, a grinder arranged in juxta-
position to the table, a bar slidable in said
groove, a lever pivotally and slidably
mounted at one end thereof on a vertically
arranged pivot on said bar and movable
about its pivot toward and from the grinder
and provided with a spindle at its free end
for holding a disk to be ground between said
lever and the table, a gauge comprising a
leaver pivotally mounted on said bar and hav-
ing a vertically arranged end portion to en-
gage said first mentioned lever between said
lever and said grinder, and means for hold-
ing said last mentioned lever from pivotal
movement.

In testimony whereof, I have hereunto
signed my name, at Syracuse, in the county
of Onondaga, and in the State of New York,
this 11th day of June, 1927.

GEORGE H. KLIPPEL.