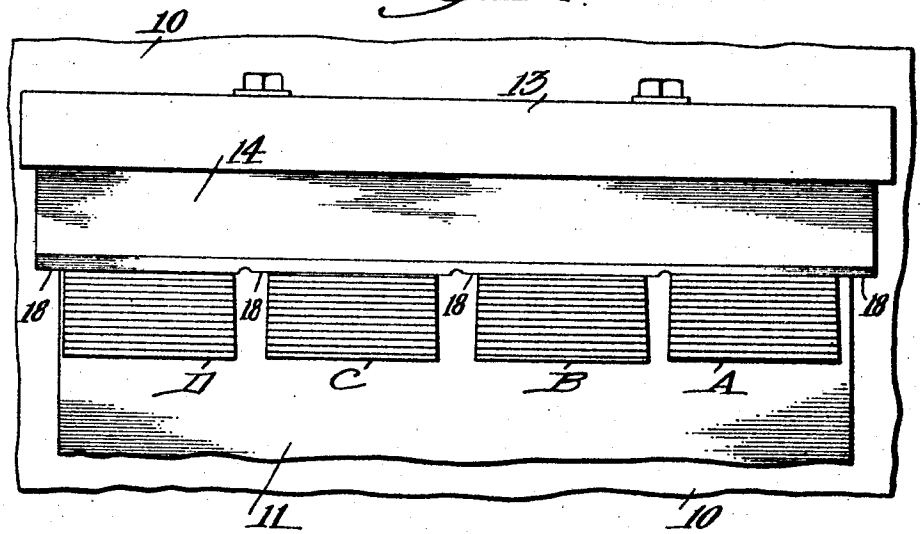
Oct. 13, 1925. 1,557,005

J. BATH

GAUGE BAR FOR GRINDING MACHINES

Filed Oct. 7, 1924

Fig. 1.



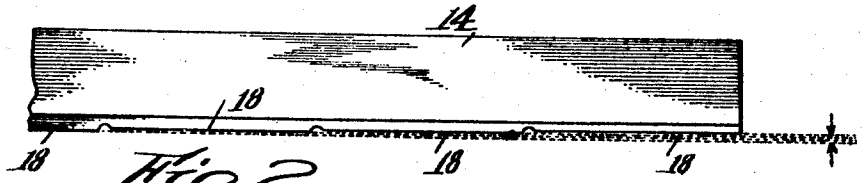


Fig. 2.

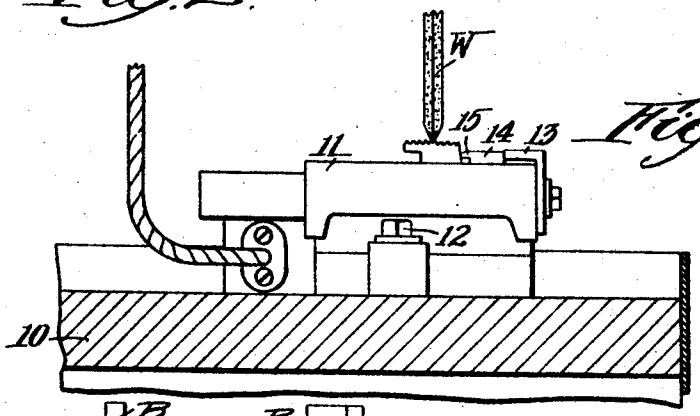


Fig. 3.

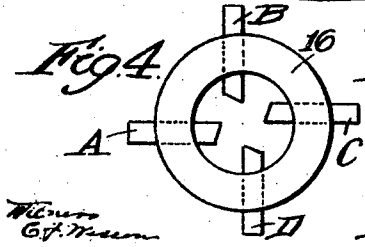


Fig. 4.

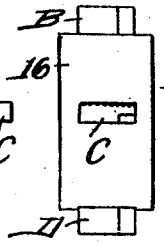


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN BATH, OF WORCESTER, MASSACHUSETTS.

GAUGE BAR FOR GRINDING MACHINES.

Application filed October 7, 1924. Serial No. 742,233.

To all whom it may concern:

Be it known that I, JOHN BATH, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Gauge Bar for Grinding Machines, of which the following is a specification.

This invention relates to the production of thread chasers and other similar articles by a process of grinding a series of parallel grooves therein.

It is the object of my invention to provide a construction by which a full set of thread chasers may be ground at a single operation. To the attainment of this object, I have provided a gauge bar of an improved type which will locate each one of a set of thread chasers so that the thread grooves will be accurately positioned thereon, with correct allowance for the angular relation of the different thread chasers when in use.

My invention further relates to arrangements of parts and details of construction which will be hereinafter described and more particularly pointed out in the appended claims. A preferred form of invention is shown in the drawing in which,

Fig. 1 is a plan view of portions of a grinding machine having my invention applied thereto:

Fig. 2 is a plan view of my improved gauge bar:

Fig. 3 is an end elevation of the parts shown in Fig. 1:

Fig. 4 is an end elevation of a thread cutting die, and

Fig. 5 is a side elevation thereof.

Referring to the drawings I have indicated a portion 10 of a work support or table forming part of a thread grinding machine. A suitable chuck 11 is mounted on the table 10 and is secured thereto in any convenient manner as by clamping bolts 12. The chuck shown in the drawings is of the magnetic type but any other convenient form of chuck may be substituted. An angle plate or guide 13 is secured to the side of the chuck 11 and projects over the magnetized face of the chuck.

My invention relates particularly to the provision of an improved gauge bar 14 for correctly positioning a series of thread chasers A, B, C, and D. The gauge bar 14 has a projecting portion 15 which is undercut or recessed so that the thread chasers may be secured firmly against the portion 15 and so that dirt will not interfere with such positioning.

When the thread chasers are in use, they are mounted in a die head 16 as indicated in Fig. 4, the chasers being placed in a series of equal-spaced angular positions. As the chasers are commonly positioned in the same radial plane, it is evident that the thread grooves on the different chasers must be differently located to compensate for the different angular positions of the chasers.

In order to produce a set of thread chasers having the threads correctly located for use in a thread die, I have provided the gauge bar 14 with a series of gauge surfaces 18. These gauge surfaces are disposed in a longitudinal series along the edge of the gauge bar and are parallel, but each surface is spaced transversely from its adjacent surfaces by an amount equal to a proportionate fraction of the pitch of the thread to be cut by the thread die.

If four thread chasers are used in a set, each surface 18 will be off-set by an amount equal to one-fourth of the pitch. The relative positions of the different surfaces 18 are clearly indicated by the dotted construction lines in Fig. 2.

In the use of my improved gauge bar, the bar is placed against the plate or guide 13 and a series of chaser blanks are then placed against the gauge surfaces 18. Electric current is then turned on to excite the magnets and hold the gauge bar and blanks firmly against the chuck.

The grinding wheel W (Fig. 3) is then reciprocated over the work, cutting the series of thread grooves as indicated in the drawings. When the finished thread chasers are thereafter assembled in a die head, as indicated in Figs. 4 and 5, it will be found that each thread chaser is correctly located to co-operate with the other thread chasers and cut a perfect thread.

By this construction all of the dies in a set may be ground at a single operation and it is not necessary to separately position and grind each individual chaser. My construction therefore results in a considerable saving of time and labor as well as in increased accuracy of the product.

Having thus described my invention, I do

not wish to be limited to the details herein disclosed otherwise than as set forth in the claims but what I claim is:—

1. In a thread grinding machine, a gauge bar for thread chasers having a plurality of parallel gauge surfaces spaced transversely from each other by equal fractions of the pitch of the thread to be ground.

2. In a thread grinding machine, a gauge bar for thread chasers having a plurality of parallel gauge surfaces disposed in a longitudinal series along one edge of said bar and spaced transversely from each other by equal fractions of the pitch of the thread to be ground.

3. In a thread grinding machine, a work table and a grinding wheel, one travelling relatively to the other, and a series of stops on said table spaced transversely to the direction of relative travel of said table and wheel, and each stop being offset from its adjacent stops by a selected fraction of the pitch of the thread to be ground.

In testimony whereof I have hereunto affixed my signature.

JOHN BATH.