Dec. 17, 1946. W. F. PARR 2,412,781

INTERNAL ADJUSTABLE THREAD GAUGE

Filed Jan. 25, 1945

Fig 4

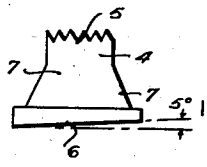


Fig. 1

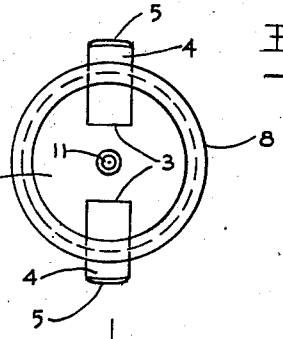


Fig. 2

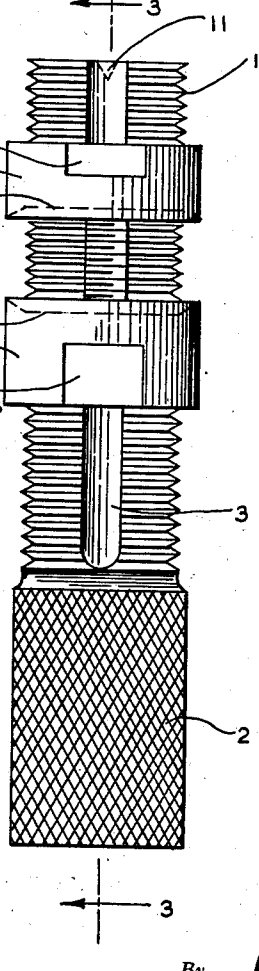


Fig 3

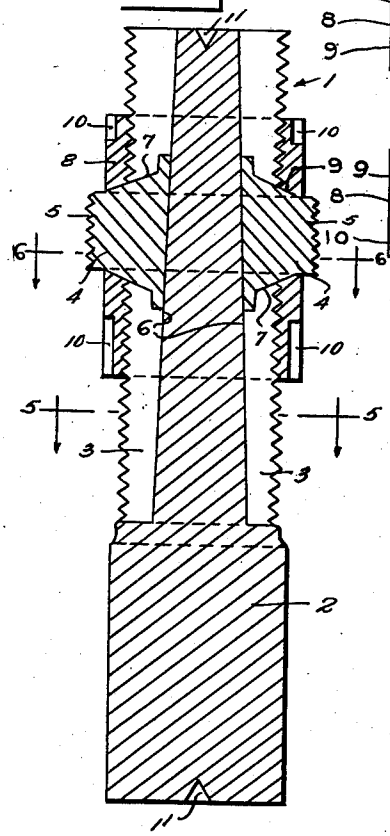


Fig. 5

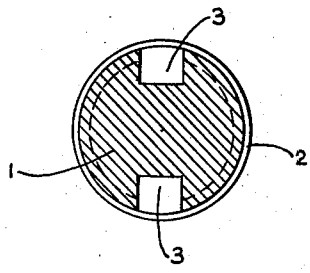
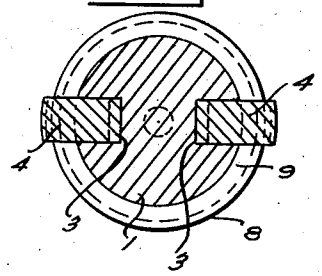


Fig 6



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INTERNAL ADJUSTABLE THREAD GAUGE

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3 Claims. (Cl. 33—199)

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The present invention relates to new and useful improvements in internal thread gauges, and has for its primary object to provide, in a manner as hereinafter set forth, an instrument of this character which may be expeditiously and accurately adjusted for various sizes of work, and which, further, is readily adaptable to different threads.

Other objects of the invention are to provide an internal adjustable thread gauge of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight, and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawing wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is an end elevational view of a gauge constructed in accordance with the present invention.

Figure 2 is a view in side elevation of the instrument.

Figure 3 is a vertical sectional view, taken substantially on the line 3—3 of Figure 2.

Figure 4 is a detail view in side elevation of one of the threaded, slidably adjustable inserts or contact pieces.

Figures 5 and 6 are views in horizontal section taken substantially on the lines 5—5 and 6—6, respectively, of Figure 3.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a threaded metallic plug 1 of suitable length and diameter. The plug 1 includes, on one end, an integral knurled handle 2. Formed longitudinally in diametrically opposite sides of the plug 1 are tapered grooves or channels 3.

Mounted for sliding adjustment in the grooves 3 are inserts 4 comprising threaded contact surfaces 5 which project beyond the periphery of the plug 1 and which are engageable with the work. The inner faces 6 of the inserts 4 conform to the taper of the grooves 3. This is illustrated to advantage in Figure 3 of the drawing. The inserts 4 further include oppositely inclined end portions 7, the purpose of which will be presently set forth.

Nuts 8 are threadedly mounted on the plug 1 for adjusting the inserts 4 and for securing said

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inserts in adjusted position. It will be observed that the inserts 4 project between the adjusting nuts 8. The nuts 8 include substantially conical inner ends 9 which conform to and contact the end portions 7 of the inserts 4. The adjusting nuts 8 further include flat face portions 10 to facilitate the use of a wrench, if necessary.

It is thought that the manner in which the instrument is used will be readily apparent from a consideration of the foregoing. Of course, the assembly is inserted in the work in an obvious manner and the threads 5 of the inserts 4 are contacted with said work. The instrument is expanded or contracted for various sizes of work by threadedly adjusting the nuts 8 on the plug 1, thereby sliding the inserts 4 longitudinally in the grooves 3, said inserts traveling on the oppositely tapered bottoms of said grooves. In this manner, the inserts 4 are projected or retracted. If desired, either or both of the nuts 8 may be graduated to facilitate accurate adjustment. The threads 5 are ground after the inserts 4 are assembled in the instrument. Toward this end, the ends of the gauge have formed therein centers 11 to facilitate mounting the instrument in a suitable machine tool. If desired, inserts 4 with threads 5 of any required pitch may be expeditiously mounted in the grooves 3 of the plug 1.

It is believed that the many advantages of an internal adjustable thread gauge constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the instrument is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. A gauge of the character described comprising a threaded plug having longitudinal, tapered grooves therein, work-engaging inserts mounted for sliding adjustment in the grooves, said inserts projecting beyond the periphery of the plug, and nuts threadedly mounted on the plug on opposite sides of the inserts, said nuts constituting means for adjusting the inserts in the grooves, and for securing said inserts in adjusted position.

2. A gauge of the character described comprising a threaded plug having tapered, longitudinal grooves therein, an integral handle on one end of the plug, work-engaging inserts mounted for sliding adjustment in the grooves and projecting beyond the periphery of the plug, said inserts comprising tapered inner faces conforming to the taper of the grooves, and further including

threaded outer portions engageable with the work, and nuts threadedly mounted on the plug on opposite sides of the inserts, said nuts constituting means for adjusting the inserts and for securing said inserts in adjusted position.

3. A gauge of the character described comprising a threaded plug having tapered, longitudinal grooves therein work-engaging inserts slidable longitudinally in the grooves and projecting beyond the periphery of the plug, said inserts including oppositely tapered ends, and spaced nuts threadedly mounted on the plugs, the inserts projecting outwardly between the nuts, said nuts including substantially conical opposed ends engageable with the tapered ends of the inserts, said nuts constituting means for adjusting the inserts and for securing said inserts in adjusted position.

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