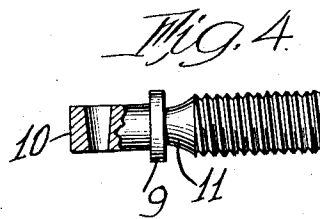
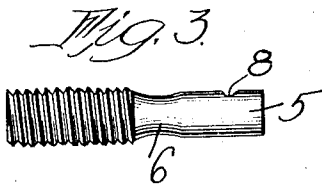
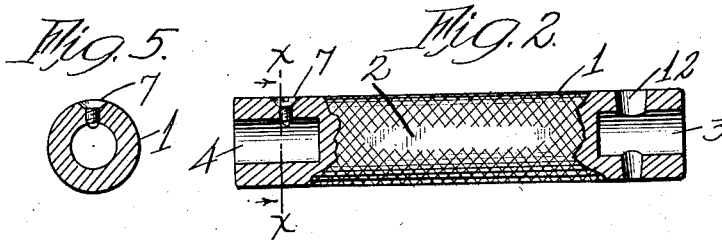
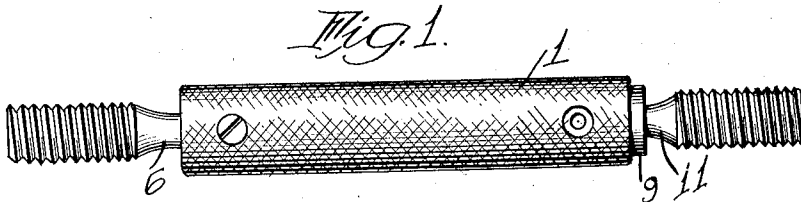


C. L. PETTIBONE.
 THREAD GAGE.
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1,339,573.

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Inventor
 CHAS. L. PETTIBONE.

Witness.

J. M. Paton.

By

Charles E. Wier

Attorney

UNITED STATES PATENT OFFICE.

CHARLES L. PETTIBONE, OF DETROIT, MICHIGAN.

THREAD-GAGE.

1,339,573.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES L. PETTIBONE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Thread-Gages, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to thread gages of a character adapted for the inspection of tapped or threaded holes. An object of the invention is to provide a gage having a thread-end of a particular pitch diameter and a second thread-end of an oversize pitch diameter, the thread-ends being removable from the shank or handle for the purpose of replacement when worn. A further object of the invention is to provide a thread-gage inexpensive in manufacture having the removable thread-ends as stated, whereby the amount of material carried in stock may be reduced inasmuch as a complete stock of thread-ends of the various pitch diameters may be carried and only a few handles or body portions. Without the removable thread-ends, the amount of the material necessary to carry in stock is increased many fold. These and other objects and the various novel features of the invention are hereinafter more fully described and claimed and shown in the accompanying drawings in which—

Figure 1 is an elevation of a thread gage embodying my invention.

Fig. 2 is a detail of the handle.

Fig. 3 is a detail of one form of thread end.

Fig. 4 is another form of thread end for use with a handle.

Fig. 5 is a section on line $x-x$ of Fig. 2.

The handle as indicated in Figs. 1 and 2 is provided substantially round in shape and milled to provide a roughness of surface, and preferably a portion 2 is provided and is left in an unmilled or smooth state enabling the handle to be marked to indicate the size of the thread ends to be used therewith. The handle, as indicated more clearly in Fig. 2, is provided with an aperture 3 in one end and a similar aperture 4 in the opposite end adapted for the in-

section of the shank of the thread-end. The preferred form of thread ends is shown in Figs. 3 and 4, Fig. 3 showing a thread end terminating in a shank 5 and connected with the threaded portion by a neck like part 6 less in diameter than the pitch diameter of the thread end. The shank 5 is insertible in the recess 4, for instance, of the handle and may be secured therein by means of a set screw 7 for which purpose the shank is notched as indicated at 8 to receive a screw.

Another type of thread end is shown in Fig. 4 in which a collar or disk shaped portion 9 is provided between the shank 10 and neck 11 of the thread-end. This collar 9 engages flatly against the end of the holder 1, and the shank extends into the recess 3 providing a solid and substantial support for the thread-end, it having a bearing by means of which the collar prevents lateral movement of the thread-end relative to the holder. The shank 10 is apertured as shown and the holder also has an aperture 12 extending through the recess 3 by means of which the thread-end may be pinned to the holder. The tapered pin is preferably used in order that the collar may be drawn securely in contact with the end of the holder.

It is to be understood that thread-ends of various sizes and pitch diameters may be used with the holder, the holders being uniform for use on the various thread-ends. Preferably the holders are marked and used with the thread-ends of specific pitch diameters in order to prevent confusion in the use of the devices. For this reason the flat unmilled portion 2 as shown in Fig. 2 is provided. Two thread-ends are to be used with each holder as will be understood from the foregoing and if the holder be marked $\frac{3}{8}$ by 24, one thread end will have marked thereon .374 and the other .376, indicating the diameter of the threads. In this instance, the thread end marked .374 is known as the "go" end and the other is known as the "not go" end. If the hole to be tested will allow the "not go" end to screw in, then it is oversize and the material must be scrapped, but if the end marked .374 properly enters the hole and the one marked .376 may not enter, then the tapped hole is of the proper diameter and threads per inch. In the inspection of the tapped or threaded holes the majority there-

of will naturally be of proper size, and what is known as the "go" end of the gage by reason of its being more often screwed into the hole becomes worn much more quickly than what is known as the "not go" end. When worn or otherwise unfit for use either or both ends may be discarded and new ones utilized with the holders.

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. A thread gage for use in the inspection of tapped holes consisting of a holder member provided with threaded end members, one of said end members being standard as to diameter and the number of threads per inch and the other of said end members being of the same number of threads per inch, but of different diameter.

2. A thread gage for inspection of tapped holes consisting of a substantially cylindrical holder member having a socket in

each end thereof, thread-ends adapted to be detachably secured in the sockets, the holder bearing indication of the diameter of the thread-ends and the number of threads per inch, one of said ends being of standard pitch diameter and threads per inch and the other of said ends being standard as to threads per inch and oversize as to diameter.

3. A thread gage consisting of a holder portion having a socket formed in the end thereof and a thread-end detachably secured therein, the said thread end having a threaded terminal portion and a shank portion for insertion in the socket and a collar between the shank and threaded portions adapted to seat against the handle end, the shank of the thread-end and the handle end having a tapered aperture for insertion of a tapered pin to draw the collar into engagement with the handle end.

In testimony whereof I sign this specification.

CHAS. L. PETTIBONE.