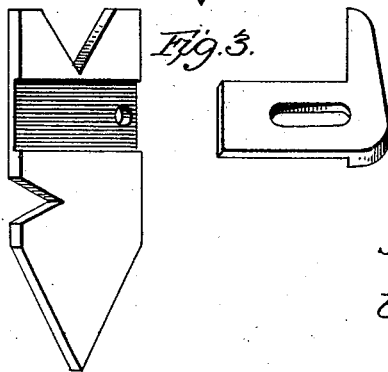
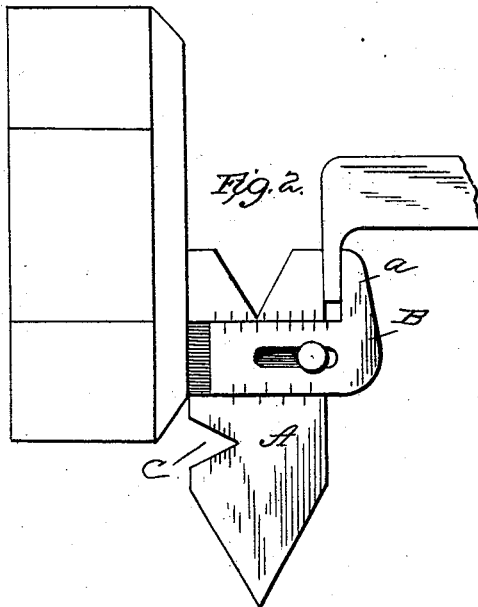
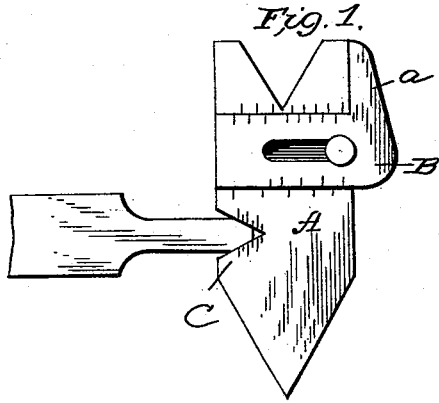


(No Model.)

N. B. TAYLOR.  
MACHINIST'S GAGE.

No. 465,397.

Patented Dec. 15, 1891.



Attest  
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# UNITED STATES PATENT OFFICE.

NORTON B. TAYLOR, OF SHARON, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD  
TO JOHN F. MCGILLICUDDY AND CHARLES A. HUETHER, OF SAME PLACE.

## MACHINIST'S GAGE.

SPECIFICATION forming part of Letters Patent No. 465,397, dated December 15, 1891.

Application filed June 20, 1891. Serial No. 396,945. (No model.)

*To all whom it may concern:*

Be it known that I, NORTON B. TAYLOR, a citizen of the United States of America, residing at Sharon, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in a Combination-Tool-Grinding Gage, of which the following is a specification.

It is the object of my invention to provide a simple form of gage for use in connection with tools adapted to cut threads in screws. It is my aim to provide a very simple form of gage by which the tool may be reduced to cut the proper size of thread required, the measurement for this purpose being absolutely accurate, which is not the case when the tool is ground by means of an ordinary rule or scale, as it is very essential that the measurements be very fine.

In carrying out my invention I provide, in addition to means for gaging the tool to cut any number of threads to the inch, means for giving the edges of the tool proper angle for cutting the screw-threads and to also provide for the proper squaring of the bottom of the tool when it is desired to cut a thread which is approximately in the shape of a truncated cone having inclined walls and a straight bottom, thus forming, practically, a combination-tool.

In the accompanying drawings, Figure 1 represents a plan view of the improved tool, and Fig. 2 shows its manner of use, while Fig. 3 shows the parts detached.

The main part of the tool is shown at A, and is composed of a single metal plate having parallel sides and its front end tapering to a point, while its rear end is provided with an angular recess of V shape. This latter recess is for the purpose of securing the proper angle for the screw-thread, and the tool is ground down until it conforms to the shape of this recess, and in this way the proper angle is secured.

In order to gage the tool so that it will cut a determined number of threads to the inch, I have provided, in connection with the main part A, a movable part B, the shank of which is fitted to the grooved face of the part A, and is held thereto by means of a set-screw

passing through a slot in the part B and through an opening in the part A, and thus the part B may be adjusted across the face of the part A. The part B has a portion *a* extending at right angles to the same, and this part *a* extends parallel with the length of the part A, and its inner edge bears against the edge of the part A, as shown in Fig. 1. The shank of the part B is graduated, as is also the main part A, along the edge of the groove in which the shank moves, and thus any number of threads to the inch may be cut by first adjusting the movable part B, so that the specific graduation on its shank will align with the same graduation on the main part, and the space between the adjacent edges of the parts A and *a* will give the size of the cutting-edge of the tool, which must be reduced to accurately fit this space. Where it is desired to cut threads which are approximately in the shape of a truncated cone having a flat space at the bottom, instead of terminating in a sharp angle, I have provided a V-shaped notch, as at C, in one of the side walls, the walls of which are provided with graduations which serve to indicate the different depths of the groove to be cut, and when the depth of groove is ascertained the bottom of the tool may be ground off until it aligns with the proper graduation on the wall of the V-shaped notch. After the tool has been properly ground it is then used to cut the thread in the ordinary manner.

It will be clear from the foregoing that the gage may be used to determine the proper size and shape in grinding the tools for the standard V-shaped thread, the V-shaped notch being used to measure the tool for this purpose, or the tool may be gaged for a square thread by the angular part B, or for the United States standard thread by the graduated notch C, the thread being in the form of a truncated cone.

Fig. 2 shows an application of my invention in the setting of a tool true with the work, so as to cut a perfectly true thread. The nut C having been trued up and set in the lathe, the tool D is placed in the gage, and the gage is then placed against the face of the nut, which will insure the placing of the

tool in a position true with the nut and where  
it can readily be secured and the gage re-  
moved, and the cutting of the thread must  
necessarily be true. The angular part ex-  
5 tends transversely of the main part, the gradu-  
ated notch is formed in the side of the main  
part to one side of the angular part, and the  
said main part has at one end a deep V-notch,  
while the other end is pointed. A long bear-  
10 ing-edge is left along the side of the main  
part opposite the parallel portion *a*, and this  
affords an accurate and certain bearing for  
truing up the parts, as in Fig. 2.

Having thus described my invention, what  
15 I claim is—  
In combination, the main part consisting

of the elongated plate and the supplemental  
part extending transversely across the main  
part in a groove at about its center and held  
adjustably by the screw passing through the 20  
slot in the supplemental part, the said sup-  
plement part having a right-angular portion  
extending parallel with the long side of the  
main part and to the end thereof, the other  
25 long side of the main part being opposite the  
angular part, substantially as described.

In testimony whereof I affix my signature in  
presence of two witnesses.

NORTON B. TAYLOR.

Witnesses:

JOHN S. BYCROFT,  
D. P. STEWART.