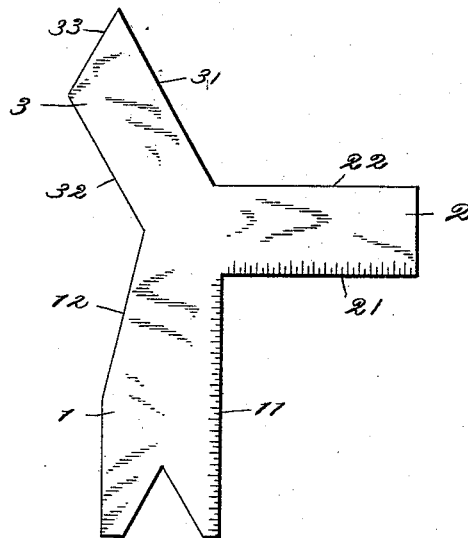


(No Model.)

O. W. SCHAUM.
COMBINATION GAGE.

No. 494,169.

Patented Mar. 28, 1893.



Witnesses

W. H. Johnson
C. M. Sweeney

Inventor
Otto H. Schaum

By his Attorneys

Maxwell Calver & Randall

UNITED STATES PATENT OFFICE.

OTTO W. SCHAUM, OF PHILADELPHIA, PENNSYLVANIA.

COMBINATION-GAGE.

SPECIFICATION forming part of Letters Patent No. 494,169, dated March 28, 1893.

Application filed December 22, 1892. Serial No. 455,997. (No model.)

To all whom it may concern:

Be it known that I, OTTO W. SCHAUM, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Combination-Gages, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to combination gages such as are used by machinists in constructing and truing-up tools and work of various kinds, and it has for its object to produce a gage of simple and convenient form and construction which may be used in gaging the cutting-points of screw-cutting tools or other similar external angles, in gaging the incline or angle of V-shaped threads or other similar interior angles, and in gaging corners of various angles, preferably square corners, the corners of hexagons or other corners of one hundred and twenty degrees, and the corners of octagons or other corners of one hundred and thirty-five degrees.

The invention will first be described with reference to the accompanying drawing, which represents the improved combination gage in which my invention resides, and then will be particularly pointed out and clearly defined in the claims at the close of this specification.

My gage is made preferably of sheet-metal, and is formed with three arms, these being numbered respectively 1, 2, and 3 in the drawing, which radiate in different directions from their meeting-point, the arm 1 extending downwardly in the drawing, the arm 2 extending to the right, and the arm 3 extending upward to the left. The proximate edges of these arms meet at predetermined angles of a definite number of degrees each. The proximate edges 11 and 21 of the arms 1 and 2 meet at a right angle, while the proximate edges 22 and 31 of the arms 2 and 3 meet at an angle of one hundred and twenty degrees, and the edge 32 of the arm 3 joins at an angle of one hundred and thirty-five degrees the inclined edge 12 of the arm 1. In the free end of the arm 1 is formed the entering angle 13, which preferably is of sixty degrees, in order that it may be used in gaging a cutting tool which

is to be used for cutting a standard screw-thread, while the edge 33 at the free end of the arm 3 is formed at a definite angle to the edge 31, preferably one of sixty degrees in order that it may be used in gaging a standard screw-thread. Suitable graduations are or may be marked on the edges of the arms, as indicated on the arms 1 and 2 in the drawing.

The gage will be applied in use in a manner which is clearly apparent from the character and construction shown in the drawing. The entering angle 13 will be utilized in the usual manner for gaging tools for cutting threads in screws, the projecting angle at the free end of arm 3 will be utilized as usual for gaging the threads of screws, and the various angles existing between the proximate edges of the various arms will serve for trying the external angles of various kinds of work.

I claim as my invention—

1. An improved combination gage substantially such as herein shown and described, formed with the three radiating arms 1, 2 and 3, the proximate edges of the said arms meeting at three predetermined definite angles as described, one arm having in the free end thereof an entering angle of a definite number of degrees, and another arm having at the free end thereof an exterior angle of a definite number of degrees, substantially as described.

2. The improved combination gage herein shown and described, and formed with the three radiating arms 1, 2 and 3, the proximate edges of arms 1 and 2 meeting at a right angle, the proximate edges of arms 2 and 3 meeting at an angle of one hundred and twenty degrees, and the proximate edges of arms 3 and 1 meeting at an angle of one hundred and thirty-five degrees, the arm 1 having in the free end thereof an entering angle of sixty degrees, and the arm 3 having at the free end thereof an exterior angle of sixty degrees, substantially as described.

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

OTTO W. SCHAUM.

Witnesses:

EDWARD S. SWAIN,
H. S. REED.