F. A. HOLLANDT & J. W. SMITH.

GAGE.

APPLICATION FILED OCT. 30, 1912.

1,107,789. Patented Aug. 18, 1914.

Fig. 1

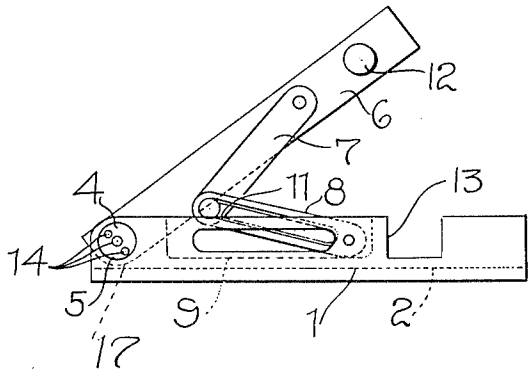


Fig. 2

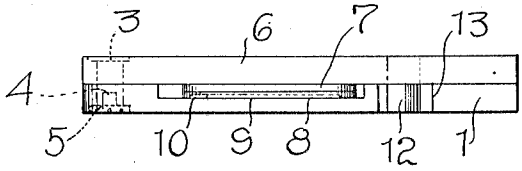
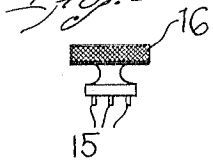


Fig. 3



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UNITED STATES PATENT OFFICE.

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GAGE.

1,107,789. Specification of Letters Patent. Patented Aug. 18, 1914.

Application filed October 30, 1912. Serial No. 728,604.

To all whom it may concern:

Be it known that we, FRIEDRICH AUGUST HOLLANDT and JOHN W. SMITH, citizens of the United States, residing at Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Gages, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to new and useful improvements in gages and more particularly to a precision angle gage, the object of the invention being to provide a gage of this character which has a wide range of usefulness and is very accurate in its work.

Another object of the invention is to provide a device of this character which will possess advantages in points of efficiency and durability, is inexpensive to manufacture and at the same time is simple in construction and operation.

With the above and other objects in view, the invention consists in the novel features of construction and the combination and arrangement of parts hereinafter more fully described, pointed out in the claims and shown in the accompanying drawings, in which,

Figure 1 is a side elevation illustrating an instrument constructed in accordance with our invention; Fig. 2 is a top plan view, the device being folded to an inoperative position; and Fig. 3 is a side elevation of the key adapted to operate the set screw which holds the adjustable bar in an operative position.

Referring more particularly to the drawings, 1 indicates the elongated body portion of the device which is provided upon one side thereof with an extension 2. Mounted in one end of the body 1 is a pivot pin 3 which is held securely in position by means of the set screw 4, said set screw being held securely in place by means of the head 5 which is countersunk in the side wall of the body 1. Pivotally mounted upon the pin 3 is a bar 6 which is adapted to be arranged at various angles with respect to the body member 1 and which is held securely in various positions by means of the brace members 7 and 8, one of said brace members being pivotally secured to the bar 6 and the other of said brace members being disposed within an elongated recess 9 and pivotally mounted between the end walls of said elongated recess. A set screw 10 is carried by the free end of the brace member 7 and adapted to be arranged within an elongated slot 11 which is formed in the brace member 8 so that the two brace members may be quickly and easily adjusted to hold the bar 6 in various positions. It will be apparent that when the bar 6 is not in use, it will be arranged in parallel relation with the body member 1 and adapted to rest upon the extension 2. The brace members 7 and 8 when not in use will be disposed within the recess 9 entirely out of the way. A pin 12 is formed adjacent the outer end of the bar 6 and extends at right angles thereto, said pin being adapted for engagement with one end of a micrometer or other measuring instrument when obtaining various angles and is disposed within the recess 13 formed in the body member when not in use. The head 5 of the set screw 4 is provided with the alined openings 14 which are adapted to receive the alined studs 15 formed upon the key 16 so that the set screw may be quickly and easily loosened or tightened to adjust the bar 6. It will be apparent that the bar 6 is rounded off at its inner end as shown at 17 so that the same will be allowed to swing and not engage with the extension 2.

Our improved precision gage is especially adapted for use by high grade mechanics, tool makers, engineers and others who have to measure angles to a very high degree of accuracy. The gage in its present form is designed to take the place of the protractor on very accurate work. The gage is also adapted for use in setting work or machine tools such as lathes, planers, milling machines and various other similar machines where various angles are required.

This tool can be set or its reading taken by the use of size blocks, micrometers, verniers, depth gages and also height gages, and the degree of accuracy to which it can be set or its reading taken will depend on how skilful the operator is. In the hands of a skilful workman, the error will be less than one-half inch in a thousand feet, .00048 in one foot, .00004 in one inch.

From the above description taken in connection with the accompanying drawings, it will be readily apparent that we have provided a simple and durable precision gage which has a wide range of usefulness

and is very accurate in its work and which can be manufactured at an extremely low cost.

While we have shown and described the preferred form of my invention, it will be obvious that various changes in the details of construction and in the proportions may be resorted to for successfully carrying our invention into practice without sacrificing any of the novel features or departing from the scope of the appended claims.

What we claim is:—

1. In a folding device of the character described, the combination of a body having a recess formed on one side thereof, an extension formed upon one side of said body, a bar pivotally secured to the end of the body and arranged in parallel relation therewith when not in use, adjustable brace members pivotally secured to said bar and body for adjusting the bar to various positions, said brace members being disposed within said recess when the device is folded, said body being provided with a transverse recess adjacent one end thereof, a pin formed adjacent the outer end of the bar and extending at right angles thereto and extending within said transverse recess when the device is folded.

2. In a folding device of the character described, the combination with a body having an elongated recess formed in one side thereof, an extension formed integral with said body and disposed at right angles thereto, a bar pivotally secured to one end of the body and arranged in parallel relation therewith when not in use and adapted to rest upon said extension, said body having an elongated recess therein, brace members pivotally secured to said body and bar and disposed within said recess when said device is folded, one of said brace members being provided with an elongated slot, a set screw carried by the other of said brace members and disposed within said slot, said body being provided with a transverse recess adjacent one end thereof, a pin formed adjacent the outer end of the bar and extending at right angles thereto and disposed within said transverse recess when the pivoted bar is not in use.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

FRIEDRICH AUGUST HOLLANDT.
JOHN W. SMITH.

Witnesses:
C. F. ENGLERT,
W. W. BURCH.