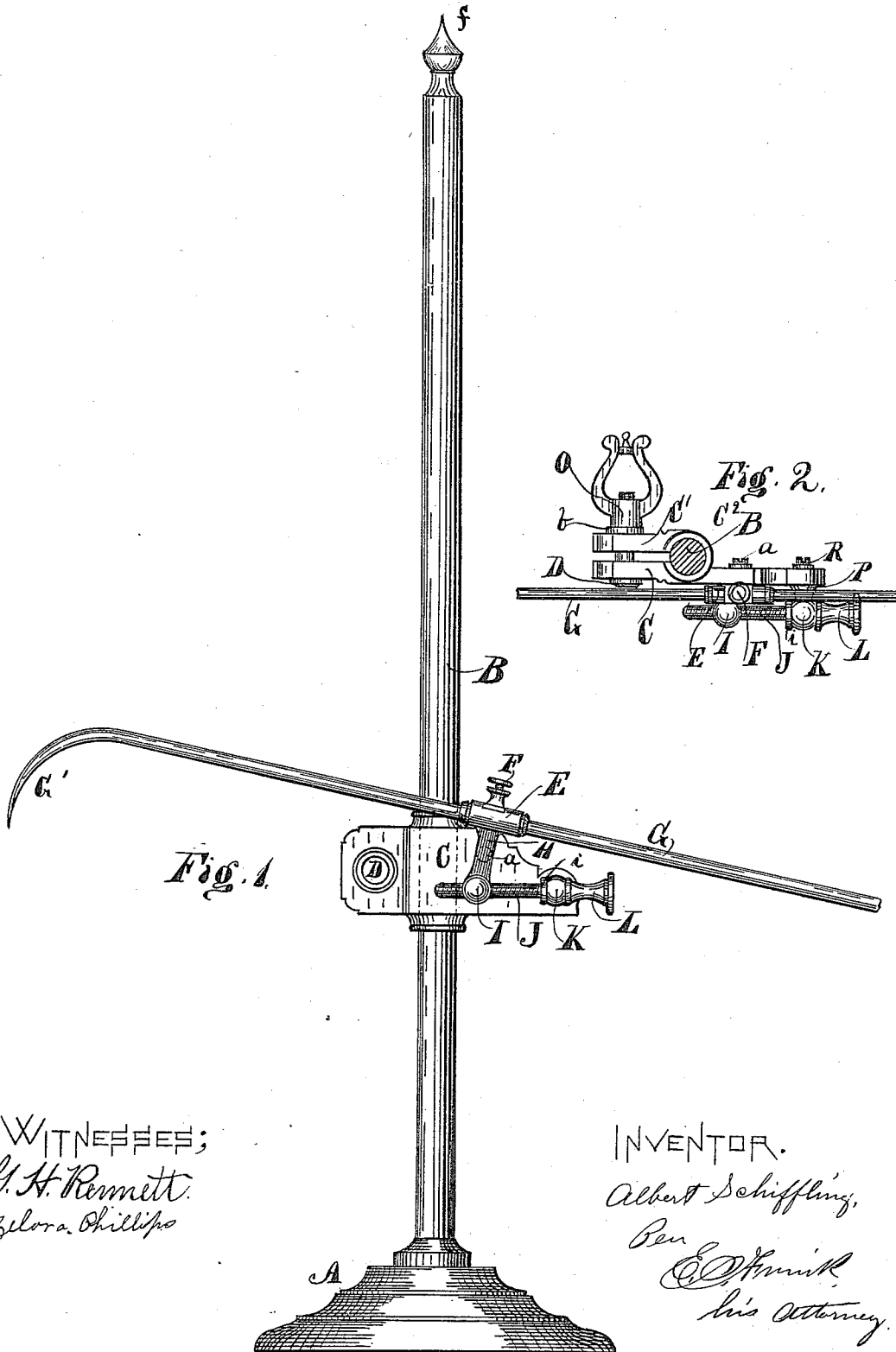


A. SCHIFFLING.
Surface-Gage.

No. 225,950

Patented Mar. 30, 1880.



WITNESSES;
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UNITED STATES PATENT OFFICE.

ALBERT SCHIFFLING, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO EWALD OVER, OF SAME PLACE.

SURFACE-GAGE.

SPECIFICATION forming part of Letters Patent No. 225,950, dated March 30, 1880.

Application filed December 22, 1879.

To all whom it may concern:

Be it known that I, ALFRED SCHIFFLING, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Surface-Gages for Machinists, of which the following is a description, reference being had to the accompanying drawings.

The object of my invention is to provide a surface-gage for machinists with an adjustment-screw, by means of which the index or measuring point may be gradually moved and set for the accurate measurement of surfaces.

My invention consists, mainly, in providing the movable slide of a surface-gage with an adjustable device for the adjustment of the index-point, and in the new combination of elements, as will be hereinafter fully described, and specially set forth in the claim.

In the accompanying drawings, in which like letters of reference in the different figures indicate like parts, Figure 1 represents an elevation of my improved gage, and Fig. 2 is a top view of the same.

Referring now to the drawings, A represents a base, in which the standard B is firmly secured at right angles to the line of the base in the ordinary manner. The upper end, *f*, of the standard B is made sharp to answer as a center-point, the use of which will be hereinafter described.

The adjustable slide C O' C² is constructed similar to that shown in the drawings—that is, the slide C is nearly straight, and its ends project on both sides of the standard B far enough to receive the binding-screw D at the front end and the studs *a* and R of the adjusting device for the index-point at the other end.

The other side, O', of the clamp is connected with the side C by the band C², which clasps the standard B, thus forming a clamp that can be adjusted as required.

The binding-screw D passes through the sides C and O', and the slide is made fast at any point of adjustment by the thumb-nut O, which has a washer, *b*, between it and the outer side of the clamp-side O'.

The index point or arm G has a curved end, G', in the ordinary manner, for indicating any irregularity of surfaces. This curved end G' may be made to receive a pencil, and used either with a pencil or without, in connection with the point *f* of the standard, to form a pair of compasses by inverting the gage. The index point or arm G is inserted in the cylinder E of the pivoted adjustable T-shaped device H, and secured at any required extension by the binding-screw F.

The adjustable T-shaped device H is constructed as follows: The arm H is provided with a pivot, *a*, about midway of its length, which is secured to the side C of the slide, as shown. The upper end is provided with the cylinder E and binding-screw F, and the lower end is provided with a pivoted lug, I, as shown.

The adjusting-screw J L is mounted in the head K of the stud R and held in position by the collar *i* and head L of the screw. The screw J operates in a screw-threaded hole formed in the lug I, as shown.

The operation of my improved surface-gage for machinists is as follows, to wit: The base is placed on the work, and the slide C, with the index-arm G, adjusted up and down in the ordinary manner; but the fine adjustment of the part G' is made by operating the screw J L—that is, by turning the milled thumb-screw from the operator the T-headed pivoted device E H is brought toward a perpendicular position and the part G' adjusted down; by reversing the motion of the said screw the device E H is inclined from a perpendicular line and the part G' is raised. It is obvious that this manner of adjustment is far superior and more accurate than heretofore, where the slide only can be adjusted.

If it is desired to use the instrument for laying off circles, then, by reversing the part G' of the index-arm, it becomes one leg of a compass, while the point *f* of the standard becomes the other leg, and the size of the circle can be had by adjusting the arm G in the cylinder E to the required distance.

Having thus described my invention, what I claim as new is—

The slide composed of the parts C O' C²,
as described, combined with the pivoted T-
shaped device E H, the pivoted lug I, the stud
K R, and the screw J L, whereby the slide
5 and index-arm G may be adjusted, substan-
tially as shown and described.

In testimony whereof I have signed my name

to this specification in the presence of two sub-
scribing witnesses.

ALBERT SCHIFFLING.

Witnesses:

E. O. FRINK,

G. H. RENNETT.