

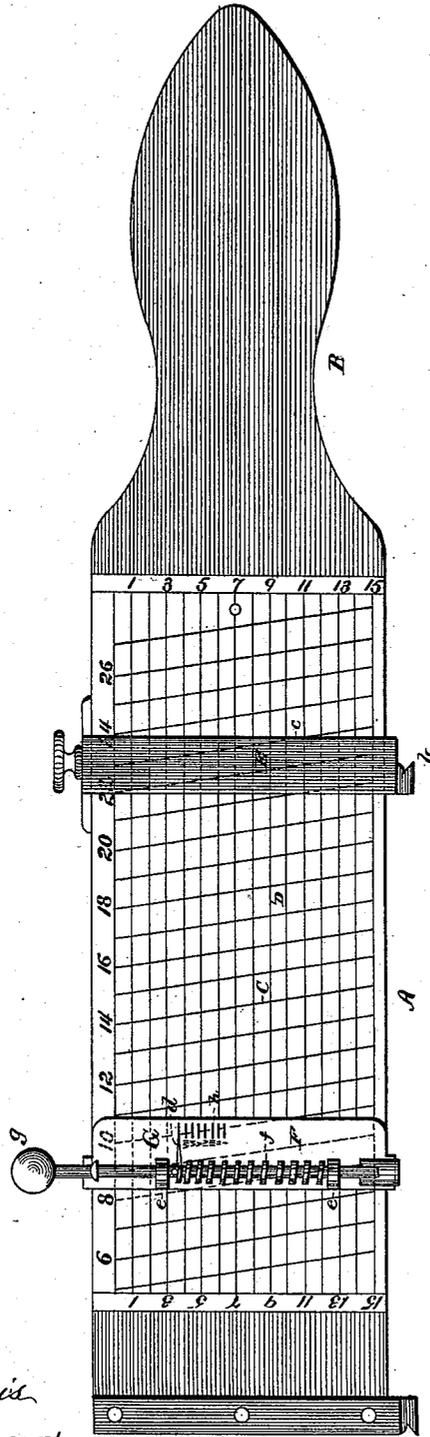
(No Model.)

O. C. KRAEHMER.
WATCH CRYSTAL GAGE.

No. 412,631.

Patented Oct. 8, 1889.

Fig. 1.



WITNESSES
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UNITED STATES PATENT OFFICE.

OSCAR C. KRAEHMER, OF GALENA, ILLINOIS.

WATCH-CRYSTAL GAGE.

SPECIFICATION forming part of Letters Patent No. 412,631, dated October 8, 1889.

Application filed September 17, 1888. Serial No. 285,633. (No model.)

To all whom it may concern:

Be it known that I, OSCAR C. KRAEHMER, a citizen of the United States, residing at Galena, in the county of Jo Daviess and State of Illinois, have invented certain new and useful Improvements in Measuring - Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention has relation to measuring-instruments; and it consists in the construction and novel combination of parts, as hereinafter set forth, illustrated in the accompanying drawing, and pointed out in the appended claims.

The object of my invention is to provide a simple device by means of which the size of a watch-bezel may be quickly ascertained, so that a crystal may be fitted thereto by its number; and a further object is to provide an attachment for obtaining the required height of a crystal.

In the drawing, the figure is a front view of the instrument.

Referring by letter to the drawing, A designates a rectangular plate of metal or any other suitable material, and, if preferred, the metal may be extended to form a handle B.

Watch-crystals are designated by sizes from 9 to 22, inclusive. Each number is divided into sixteenths, and each sixteenth is divided into eighths, which indicates the height centrally of the glass. The diagonal lines C on the plate indicate the whole numbers and the longitudinal lines D are the sixteenths.

To obtain the size and height of glass required for a watch the fixed point *a*, projecting from one edge of the plate, is inserted in the flange of the bezel on the watch and the point *b* on the sliding bar *E* is inserted in the bezel-flange directly opposite the point *a*. The lines intersected by the side *c* of the bar *E* will indicate the size of glass wanted.

F is the sliding plate having the height-gage G thereon, which has an indicator-point *d*, and is adapted to move in guide *e* on the plate, a coiled spring *f* being provided on the gage G, between the indicator-point and the low erguide, for the purpose of returning it to its normal position when released. When the points *a b* are in the flange or cut of the bezel, the plate F is moved to bring the gage G directly over the center post of the watch-movement. Then by placing the finger on the knob *g* and pushing the opposite end of the gage G down upon the center post the point *d* will indicate on the scale *h* on the plate the height of glass wanted.

Both sliding plates are provided at their ends with suitable devices for engaging over the edges of the plate A.

It is evident that the size of a glass may be ascertained by placing the glass edge up between the gages; also the height by pushing the opposite end of the gages to the center of inside of glass.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the plate A, the fixed point *a*, the movable point *b*, the sliding plate F, and the spring-controlled gage thereon, substantially as specified.

2. The combination of the plate having the diagonal and longitudinal marks thereon, the fixed point *a*, the sliding plate having the point *b*, the sliding plate F, the bar G, moving in guides on said plate, the indicator-point, and the spring, substantially as specified.

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

OSCAR C. KRAEHMER.

Witnesses:

FRANK BO3TWICK,
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