

E. & W. SCHLEGEL.

WATCH-GLASS.

No. 187,180.

Patented Feb. 6, 1877.

FIG 1

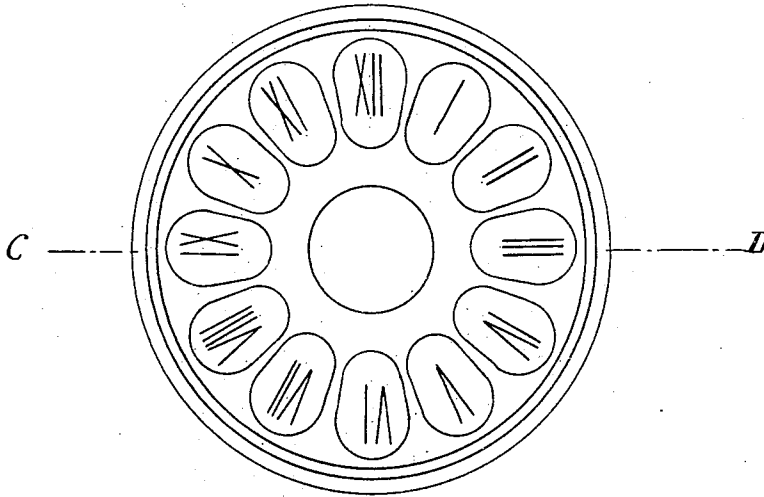
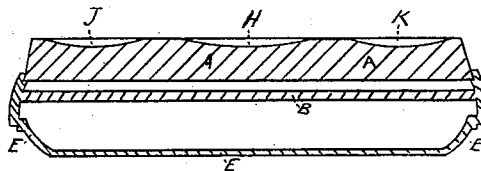


FIG 2



WITNESSES

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UNITED STATES PATENT OFFICE.

EDWARD SCHLEGEL AND WENZEL SCHLEGEL, OF BOSTON, MASS.

IMPROVEMENT IN WATCH-GLASSES.

Specification forming part of Letters Patent No. **187,180**, dated February 6, 1877; application filed October 22, 1875.

To all whom it may concern:

Be it known that we, EDWARD SCHLEGEL and WENZEL SCHLEGEL, both of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Colored Crystal for Watches and Clocks, of which the following is a specification:

The nature of the invention is that of a crystal for watches and clocks, made of glass, colored on one side, and ground away at the parts before the dial-figures, and sometimes in the center, or elsewhere, to a certain depth, leaving the ground parts transparent; and the object is the production of a superficially hardened and ornamental crystal for watch and clock faces.

Figure 1 shows the front face of the watch or clock, being the crystal with the ornamentation hereinafter described, and seen through it, the dial of the same with its necessary figures thereon inscribed. Fig. 2 is a cross-section of Fig. 1, in the line C D.

In the drawings, A, Fig. 2, is the crystal, seen in section. B, Fig. 2, is the dial in section. E E E is the frame holding the crystal A and the dial B together, and including also, in practice, the handle and works of the watch or clock.

In Fig. 1 are seen the dial-figures, from 1 to 12, inclusive. These are seen through the glass of the crystal, which is colorless and transparent only within the bounds of the oval figures seen in Fig. 1, and those of the circle seen in the center of Fig. 1. These ovals and the circle are thus made.

The upper surface of the crystal is colored, the coloring matter being embodied with the glass in the manufacture of the same by means known to glass-workers, so as to be translucent but not transparent.

We do not, however, confine ourselves to a translucent coating, using sometimes an opaque one. We do not confine ourselves to any particular color, using purple, maroon color, blue, or any other producible on glass by artisans skilled in that manufacture.

The oval figures and the circle are then ground, or, as it is termed in the trade, cut away by grinding, being subsequently polished by means commonly used in the art of glass-cutting. The ground surfaces, then, in section, present the form of the slightly-flattened arc of a circle, as seen in Fig. 2 at the points marked 9, H, and 3, and at these points, and not elsewhere, the crystal is transparent. The rest of the face of the crystal retains the hue with which it was originally colored.

We do not confine ourselves to the figures of ovals or circles herein shown, but use any tasteful and symmetrical figures. We do not claim the ornamentation of glassware by the grinding away of a colored surface until the transparent portion of the glass is reached. The admixture of the coloring substances used with the body of the glass effects the hardening of the surface of the latter, thus preventing the scratching and consequent dulling of the face of the crystal by the attrition of continued wear, and the necessary renewal of a portion of the coloring, to enable the figures of the dial and the watch or clock to be plainly seen, communicates an attractive ornamentation to the crystal and face of the watch or clock, and the lowering of the surface of the crystal subsequent to the coloring in the places mentioned removes those portions from the dulling effect of constant wear.

We claim—

1. As a new manufacture, a watch or clock crystal having opaque bars, or divisions and transparent intervals, substantially as and for the purpose herein set forth.

2. The combination of the watch or clock dial B with the crystal A, when the latter is furnished on one surface or both surfaces with a colored coating removed in portions, all substantially as described and shown.

EDWARD SCHLEGEL.
WENZEL SCHLEGEL.

Witnesses:

LEMUEL P. JENKS,
T. DAVIS.