

UNITED STATES PATENT OFFICE.

CARL P. CULLMANN, OF IDAR, AND CARL A. LORENZ, OF OBERSTEIN,
GERMANY.

FABRICATION OF ONYX FROM AGATE.

SPECIFICATION forming part of Letters Patent No. 230,753, dated August 3, 1880.

Application filed December 29, 1879. Patented in Germany August 21, 1879, and in France June 30, 1879.

To all whom it may concern:

Be it known that we, CARL P. CULLMANN, of Idar, and CARL AUGUST LORENZ, of Oberstein, Germany, have invented a new and useful Improvement in Making Onyx Stones from Agate, of which the following is a specification.

The object of the invention is to make onyx stones out of agate stones.

10 In carrying out our invention the agate stones are first ground to a certain pattern, and are then placed in a bath of iron dissolved in dilute nitric acid. This gives the stone the red color. The stones are immersed into the bath only one millimeter, or according to the thickness that this red part is to have.

15 The bath is best arranged in a flat porcelain or glass dish, and as much dilute nitric acid is poured into this dish as the bath shall have height or thickness. The stones remain in this bath for about eight days, and are then taken out, and that part that is to be white or yellow is immersed in like manner in a bath consisting of one part of carbonate of potassa dissolved 25 in water. They remain in this bath for about

eight days, and are then taken out and dried on a stove for about eight days. They are then placed in an earthenware pot, which is carefully closed, and placed on a stove. The stones are thus burned and thereby receive their color. The heat must be so strong that the iron plate on which the pot stands becomes red.

We are aware that it is not broadly new to boil agates in oil, acids, &c., and then to dry them, for the purpose of improving their color; but

What we claim as new is—

The process of manufacturing onyx stones from agate, by immersing one side in a bath of dilute nitric acid and iron, the other side in a bath of carbonate of potassa and water, then drying the stones on a stove, and then burning them to fix the color, as and for the purpose set forth.

CARL PHILIPP CULLMANN.
CARL AUGUST LORENZ.

Witnesses:

JOHANNES BRANDT,
CARL ROBERT FRANZ SCHULTZE.