

(No Model.)

P. WÜRTZ.
Mosaic Work for Pavements, &c.
No. 241,771. Patented May 17, 1881.

Fig. 1.

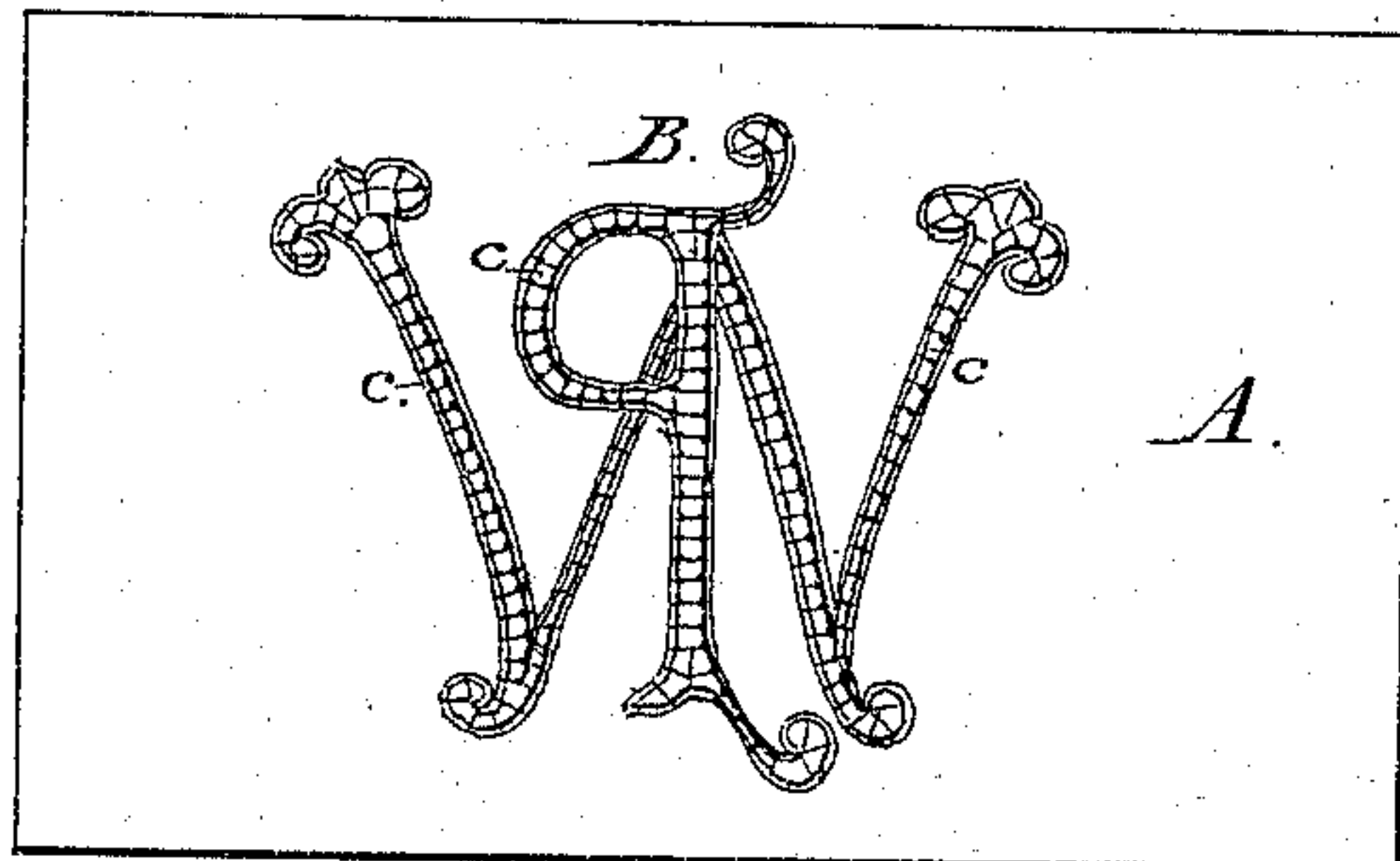


Fig. 2.



Fig. 3.



Fig. 4.

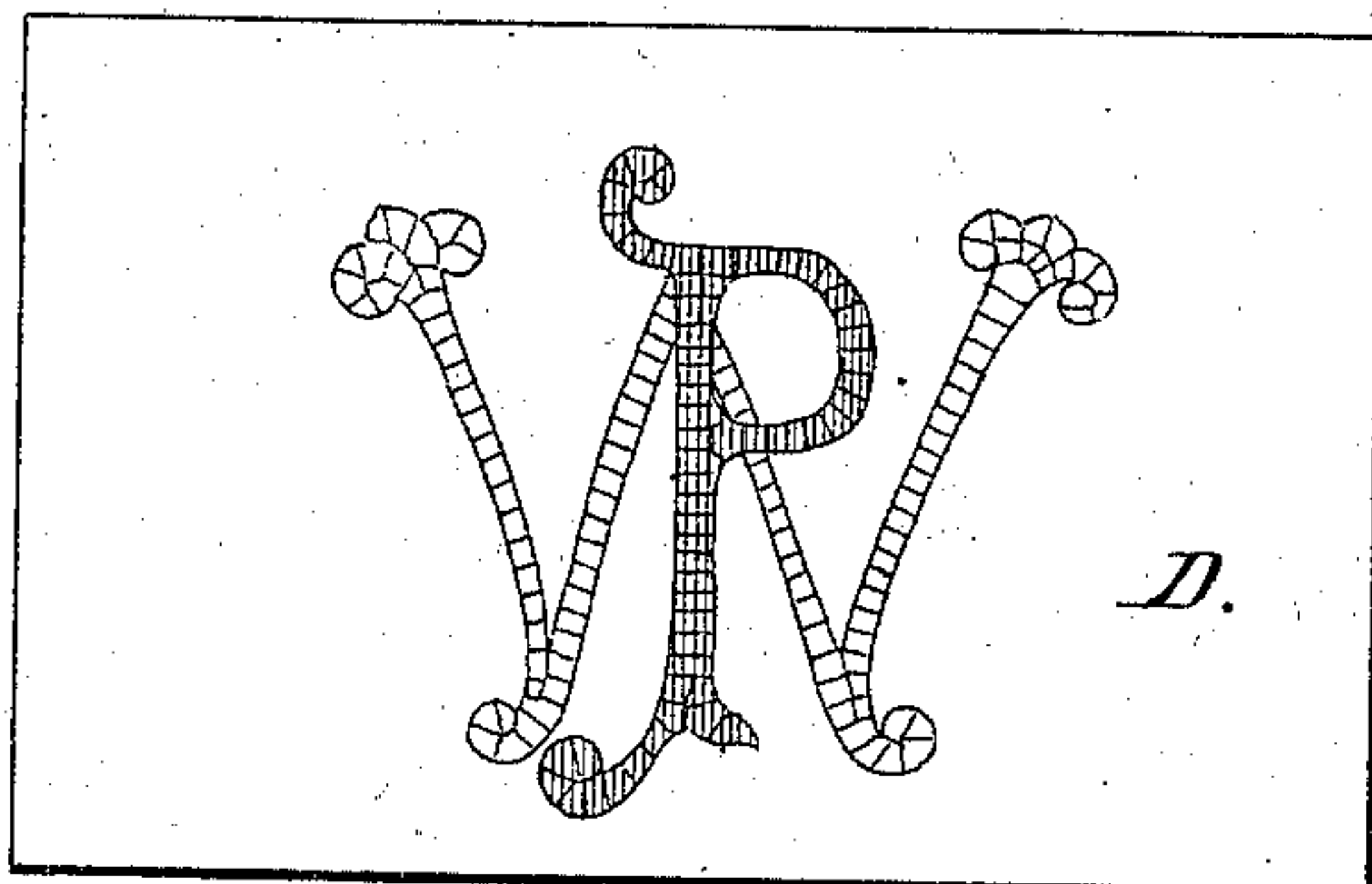
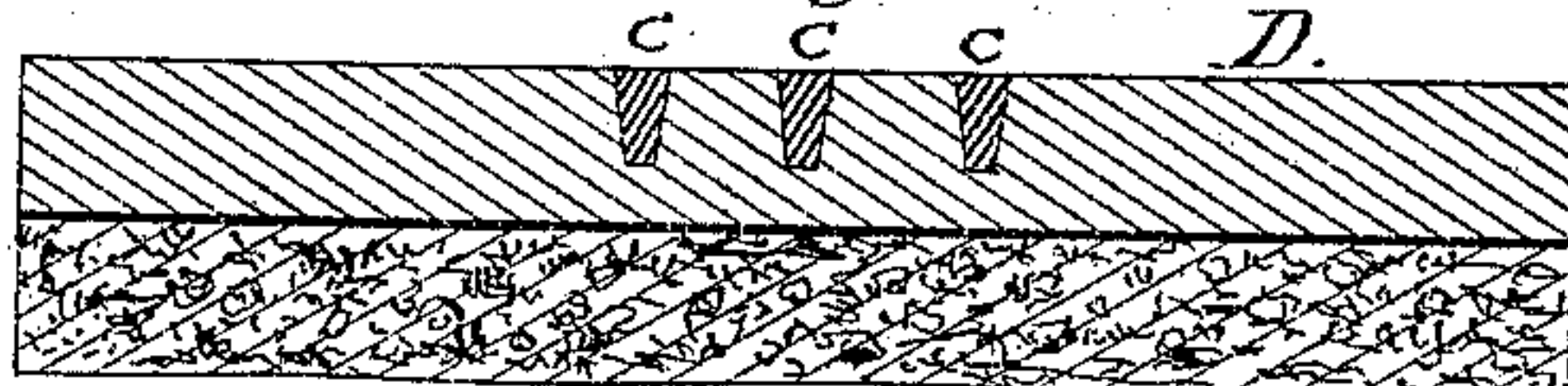


Fig. 5.



Fig. 6.



Witnesses:
Edw. W. Down
J. M. Kaul

Inventor:
Paul Würtz,
by his attorney
T. A. Seaton

UNITED STATES PATENT OFFICE.

PAUL WÜRTZ, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND MEIER HANAU, OF SAME PLACE.

MOSAIC WORK FOR PAVEMENTS, &c.

SPECIFICATION forming part of Letters Patent No. 241,771, dated May 17, 1881.

Application filed March 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, PAUL WÜRTZ, a citizen of the Republic of Switzerland, residing in the city, county, and State of New York, have invented certain new and useful Improvements in the Manufacture of Mosaic Work for Pavements, &c., of which the following is a specification.

My invention relates to improvements in the manufacture of mosaic work for inlaid flooring, the tops of counters in stores, as well as tables and other similar articles of furniture.

According to my invention, I produce in the center or other part of a tiled floor the monogram or figure desired in different-colored pieces. The separate pieces are from a quarter to half inch deep. They are, by preference, broken with a hammer to have approximately straight sides; but of course many of them may be wedge-shaped, and some round to fit the curves of the letters or designs.

In order to produce the design or monogram, I take a stiff sheet of Manila paper, or other suitable material, with the letters or design marked thereon, but reading backward, and stretch it tightly on a light frame. Then, having a quantity of different-colored stones which are to form the design of the tiling, I take up the different stones and touch them on some gum-arabic or other adhesive cement, and lay them in the position on the drawing, taking care that their previously-smoothed side is downward. I take the narrower stones as the lines in the design become narrower, or, if it is a peculiarly-shaped form for which I have not a stone to fit, I chip off the stone with a hammer until it gives the right outline on the smooth side. All of the stones may be about the same length and taper slightly. The adhesive material with which I attach each of the stones to the paper performs an important function. After I have filled up the design with the proper stones, I carefully lift the paper in its stiffly-extended condition, with the stones on it, turn it over, and press it and the stones down into a bed of lime cement or other durable insoluble cement, which has previously been prepared to receive them. This bed of cement, when I am constructing pavement or flooring, I prefer to be supported by a sub-

stratum of concrete, preferably formed of broken stones or coarse gravel mixed with cement. After the stones have been embedded in the soft cement and the mass allowed to set, the paper can be removed by drawing it up carefully from one edge; or I readily detach the stones from the paper by applying to the paper warm water in sufficient quantity to thoroughly saturate the paper. The bed of cement over the floor, in case of the latter being formed of wood, I prefer to be about an inch or an inch and a quarter thick. In laying this foundation I prefer, first, to put a layer of cement about an inch thick, and let the same become almost set. This being done, just before placing the stones to form the design in position, I apply another half-inch of new and quite soft cement. For particular work, the colored stones forming the design are put in place, as above described, and a filling of blocks of white or other colored stones desired may be placed in position on the remainder of the surface by hand. After the whole of the blocks have been placed in position, I level any inequality by a smooth plate of stone or metal, on which I press by my hand or foot, or by rollers, or by any other suitable means. The cement will exude slightly through all the cracks between the stones; but this surplus will be readily removed by a cloth or a straight stick or other means passed over the top. After the whole design has been allowed to set and dry for a day or two, I grind the whole surface, so as to make it perfectly smooth, by means of sand, and polish it with oil and pumice-stone.

I can produce peculiar effects by using cements of different shades, or I can use the ordinary cement, and after the work has been finished scraping the cement out for a little depth between the stones, and filling the channels so formed with a cement of different color.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out my invention.

Figure 1 represents a sheet of paper having a design indicated thereon, and a series of stones or portions of material arranged in position to form a device in mosaic work. Fig. 2 is a section of the sheet of paper with the

stones thereon. Fig. 3 is a section showing the paper or analogous material with the stones adhering thereto and embedded in the cement. Fig. 4 is a face view of the finished mosaic. Fig. 5 shows a cross-section representing the stones forming the mosaic simply embedded in the cement. Fig. 6 represents a cross-section, showing the same device with the substratum of concrete.

10 Similar letters of reference indicate corresponding parts in all the figures.

A represents the sheet of paper or like material, and B the design thereon.

15 C C are the portions of stone or material arranged over the design on the paper in position to be subsequently transferred to the cement. The stones C are attached to the material A by means of a layer of soluble cement, a. After the stones have been thus arranged 20 above the design and allowed to dry sufficiently, the paper is turned over and the stones embedded into the layer of cement D, as represented by Fig. 3. This having been done, the material A is saturated with hot water or 25 other solvent adapted to dissolve the cement

a employed to cause the portions of stone to adhere to the material A. After the stones have been embedded in the cement D, as shown by Fig. 3, they are carefully pressed down, so as to form a perfectly flat surface by hand or 30 by rollers, or other suitable means. After this has been done and the work has been allowed time to entirely or partly harden, it is carefully ground and polished, as previously described.

I claim as my invention—

35 The process of manufacturing mosaic work by applying different-colored stones to a paper or other equivalent surface, having the design in reverse, and subsequently embedding the stones and removing the holding material, substantially as described. 40

In testimony whereof I have hereunto set my hand at New York city, this 17th day of March, 1881, in the presence of two subscribing witnesses.

PAUL WÜRTZ.

Witnesses:

W. COLBORNE BROOKES,
CHARLES C. STETSON.