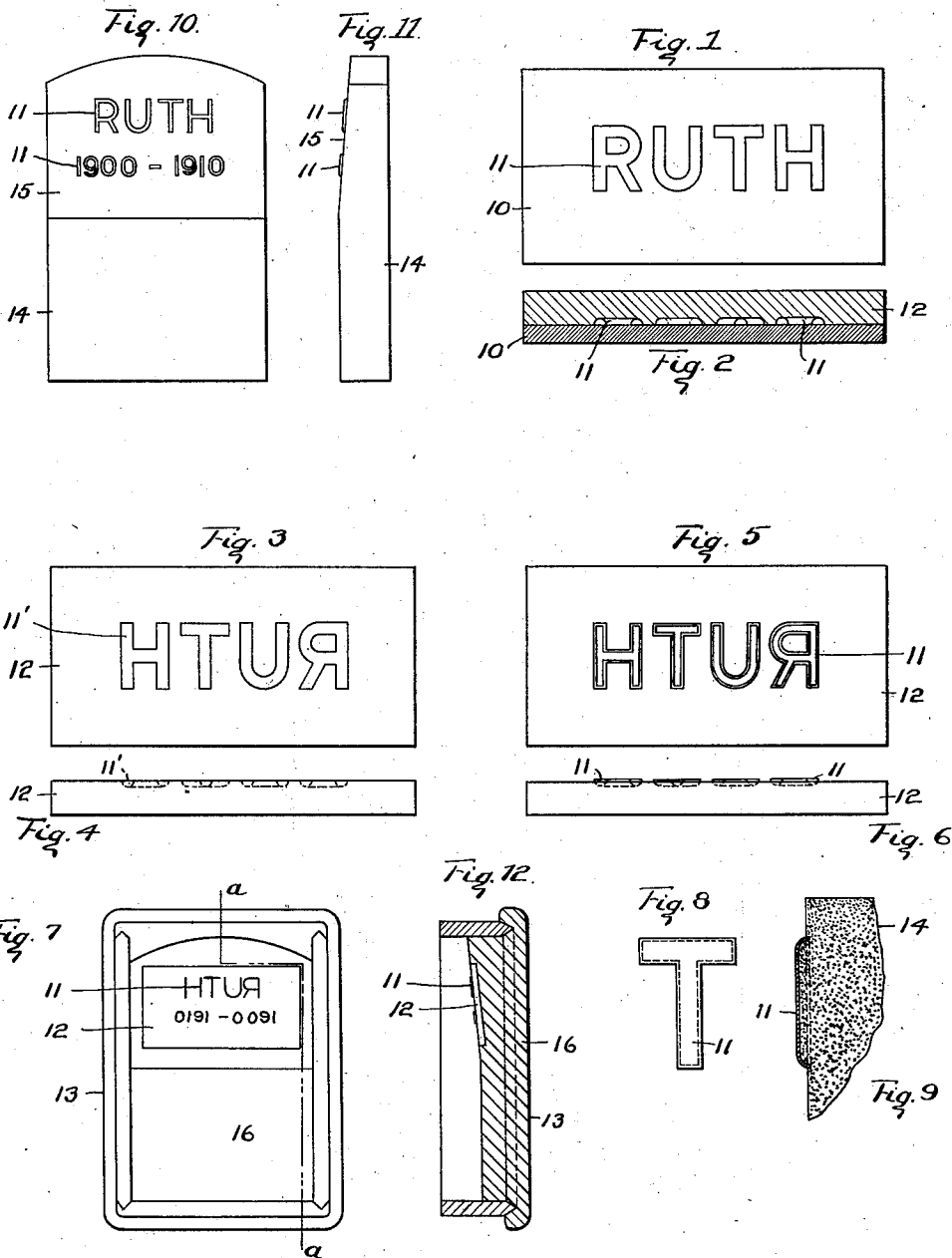


P. F. NACHTIGALL.
TOMBSTONE, SIGN, &c.
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1,021,789.

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WITNESSES:

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TOMBSTONE, SIGN, &c.

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To all whom it may concern:

Be it known that I, PAUL F. NACHTIGALL, a citizen of the United States, and residing at 1112 Taylor street, in the city of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Tombstones, Signs, &c., of which the following is a specification.

My present invention relates to the art of manufacturing tombstones and grave markers, which are designed to replace the granite tombstones and grave markers hitherto in use, and also to signs, decorative plates and the like which are designed to replace signs and decorative tiles now commonly in use.

The invention consists in the production of tombstones, etc., having relief lettering and designs in connection with blocks, plates, tiles, etc., the letters and designs being composed of projecting fragile material such as porcelain, glass, or the like.

Referring to the drawings, which illustrate the process of manufacture of the article, Figure 1 is a plan view of the plastic plate or platen upon which is placed the arrangement of letters or the design which it is desired to provide on the tombstone, etc. Fig. 2 is a sectional view of the same showing the matrix thereon; Fig. 3 is a plan view of the matrix; Fig. 4, a side elevational view of the matrix; Fig. 5, a plan view of the reduced matrix showing the letters in place; Fig. 6, a side elevational view of Fig. 5; Fig. 7, a plan view of a mold with the matrix in position; Fig. 8, a plan view of a fragile letter; Fig. 9, a sectional view of the finished product; Fig. 10, a front view of a grave marker and Fig. 11, a side view of the same, and Fig. 12, a sectional view on line *a-a* of Fig. 7.

I provide a plate or platen 10 of adhesive material such as modeling clay or wax, the top surface of which corresponds to the intended surface of the tombstone or other article about to be made. On this top surface of platen 10 I lay the fragile letters and numerals 11 or other design of fragile material which it is intended to place on the tombstone, and in the order and position in which such letters or designs are intended to appear on the finished article. In the drawings, which illustrate a grave marker or head stone, the letters and numer-

als 11 are made of glass of suitable thickness and shape. I prefer that the letters and numerals shall have convex exterior surfaces and concave inner surfaces, but may use any other form. I then apply a suitable grease or oil to the exposed surfaces of the letters and numerals or other design and spread over the top surface of the clay platen and the letters and numerals or other design a layer of plastic plaster of Paris 12. After the plaster of Paris has set the same is removed from the clay and letters and numerals, its surface, which was in contact with the clay and letters and numerals disclosing a perfect mold of the letters and numerals. I then plane down the said surface of the mold or matrix 12 the proper amount to permit a desired proportion of the letters and numerals, when inserted in the corresponding recesses 11' in the mold or matrix 12 to project from the surface thereof, as illustrated in Fig. 6. I then place the matrix in a suitable mold 13, which is constructed of suitable material, as plaster of Paris, and which conforms to the desired shape of the article to be produced.

In the drawing the article illustrated is a head-stone 14, the surface 15 on which the lettering and numerals appear, is beveled. The bottom 16 of the mold is therefore provided with a corresponding surface and a sufficient recess is provided in the beveled surface to receive matrix 12, the exposed surface of the matrix being flush with the adjacent surface of the bottom. The letters and numerals or other designs are then inserted in their corresponding molds in the matrix, and the desired proportions of the same project upwardly from the surface of the matrix. Concrete or other plastic material is then tamped into the mold 13. The lower portion of the concrete covers the matrix and letters and numerals, or other design; it makes contact with the concave surfaces of the letters and numerals 11 and engages about the projecting portions of the same. When the mold has been filled and tamped the contents are permitted to set either in or out of the mold and when set the letters and numerals or other design will be found to be firmly secured in the concrete, since the portions of the same which projected from the matrix are now firmly embedded in the concrete, as shown in Fig. 9. The letters and numerals, or

other design, appear on the finished product in the precise arrangement in which they were initially placed on the clay platen.

I have found that letters and designs of quite thin glass or porcelain may be used and that there is practically no danger of breakage in inserting them into the concrete by my method. It is quite a difficult matter to destroy the letters on the finished article since the concrete bears against the inner concave surface of the same and therefore reinforces the letters, etc.

The inner surfaces of the letters or designs may be coated with any desired coloring matter and thereby give to the same any desired color. The concrete may also have in it any desired ingredients which will add to its strength or beauty.

By my invention it is thus apparent that I may manufacture any desired form of article which shall have in relief any suitable inscription or decorative design and this at small cost. I contemplate using my process of attaching fragile letters or designs to all forms of concrete or other structures formed of plastic composition where the same are applicable, the head stone illustrated in the drawings being only one example of the intended use.

What I claim is:

1. The process of securing fragile inscriptive and decorative members to the surface of a plastic composition which consists in arranging the fragile members in the desired order on the surface of a plate, then smearing the exposed portions of the fragile members with grease, then spreading over the plate and fragile members a layer

of plaster of Paris to form a matrix of the fragile members, then removing the matrix when set and removing a portion of the molded surface of the same, then inserting the fragile members in the corresponding molds in the hardened matrix, then tamping suitable plastic material onto the surface of the matrix and rear portions of the fragile members and finally separating the plastic material and the attached fragile members from the matrix.

2. The process of securing fragile inscriptive and decorative members to concrete structures consisting in arranging the members in the desired manner on the surface of a flat clay plate, then applying grease to the exposed portions of the fragile members, then spreading over the surface of the clay plate and fragile members a layer of plaster Paris to produce a matrix of the said members, then removing the hardened matrix from the clay plate and fragile members and removing a portion of the molded surface of the matrix, then inserting the fragile members in an inverted manner in the corresponding molds on the matrix, then tamping a concrete mixture onto the fragile members and adjacent surface of the matrix and then separating the concrete mixture with the attached fragile members from the matrix.

In witness whereof I hereunto subscribe my name in the presence of two witnesses.

PAUL F. NACHTIGALL.

Witnesses:

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ELWIN M. HULSE.