

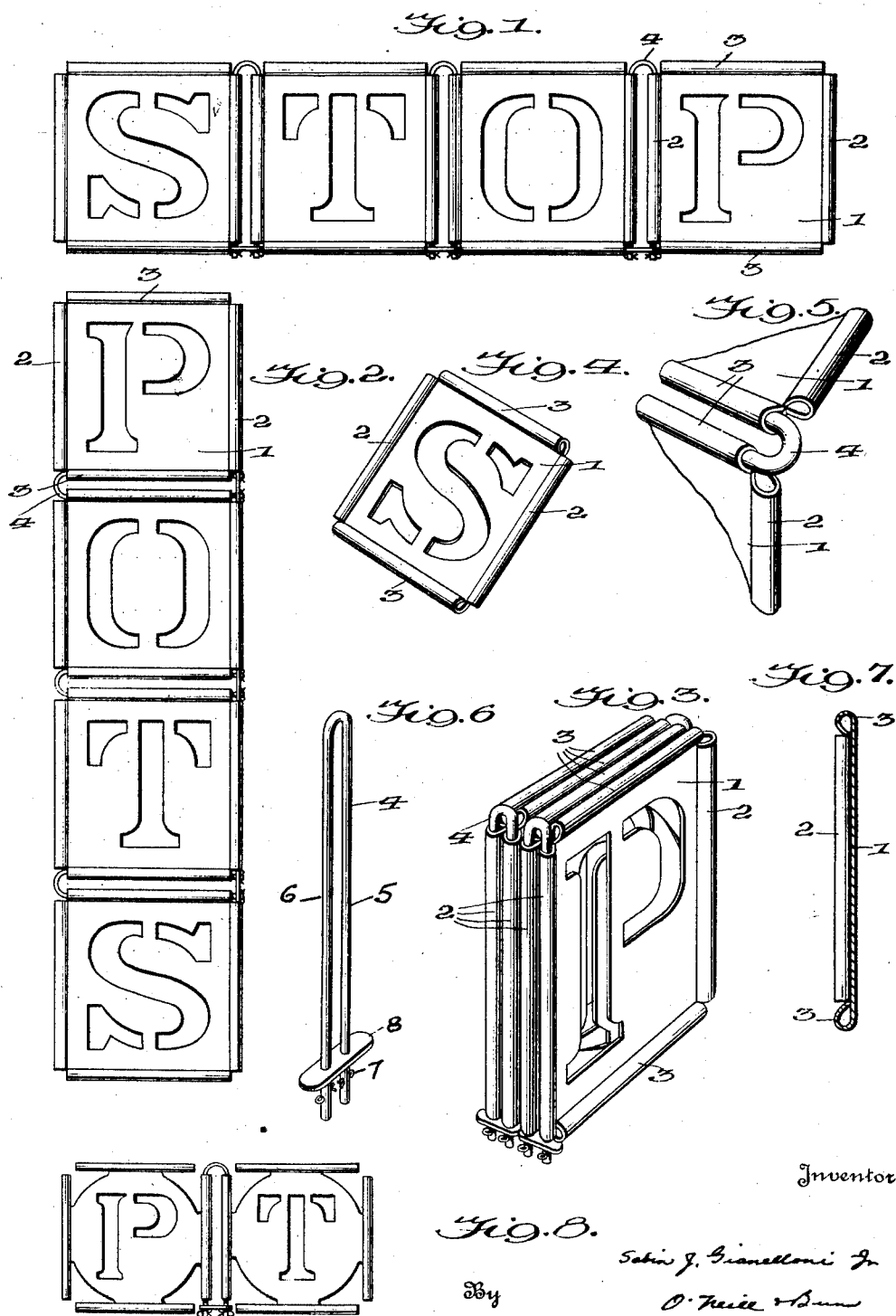
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STENCIL UNIT AND METHOD OF ASSEMBLING THE SAME

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This invention relates to stencilling, and more particularly to the stencil plates used in this art.

Broadly, the stencilling operation comprehends the utilization of a plurality of plate units, each cut to produce the outline of a letter, word, phrase, figure or symbol, and the unit is laid upon the surface on which the desired characters are to be shown, and paint, crayon, or other suitable medium is applied to said surface, on the area displayed through the symbol-forming opening provided in the unit. Usually the plates are each separate units, and, in practice, the separate units are first arranged in the alignment proper to produce the desired information upon the surface to be treated, and various devices may then be utilized to retain the units in proper relative position, each to each, while the marking fluid is being applied to the surface upon which the information is to be displayed.

One of the objects of the present invention is the provision of a stencil unit so constructed as to be operatively and detachably connected to a similar unit, and in such manner that a plurality of connected units may be folded together or compacted into a minimum space.

Another object of the invention is the provision of such a unit, provided along all of its side edges with means for detachably connecting it to another unit, whereby the data to be displayed upon the surface being treated, may be shown with the constituent letters, figures or symbols, either in vertical or in horizontal alignment, as desired.

Still another object of the invention is the provision of means for so interconnecting said units that either side edge or end of one unit may be quickly, pivotally and detachably connected to either side edge or end of any other unit.

Other objects of the invention will be made apparent in the following specifications when read in connection with the drawings forming a part thereof.

In said drawings:

Fig. 1 is a front elevation of a plurality of stencil units interconnected for printing letters in horizontal parallelism.

Fig. 2 is a similar view showing the units connected for printing letters in vertical parallelism.

Fig. 3 is a perspective view showing a plurality of interconnected units arranged in partial collapsed or compacted relation.

Fig. 4 is a perspective view of a single unit.

Fig. 5 is an enlarged fragmentary, perspective view of portions of connected corners of two of the units.

Fig. 6 is a perspective view of the elements utilized for interconnecting the units.

Fig. 7 is a side elevation of two of the units, one nested upon the other, and,

Fig. 8 is a modified form of the structure.

Now referring specifically to the drawings in which similar reference numerals indicate like parts throughout the several views, the numeral 1, Fig. 4, indicates one of the units, here illustrated as having the letter S cut therethrough. While the units may of course be formed of any suitable material, they are preferably constructed of sheet metal, and, as here illustrated, each unit is in the form of a square, for a purpose to be hereinafter explained.

At each side of the letter cut in the unit is integrally formed a hollow bead 2, 2, a similar bead 3, 3, being provided above and below the letter, all of the beads extending outwardly from the horizontal plane of the face of the unit, to form strengthening ribs or reinforcements, in the manner indicated in Fig. 3, and as will be understood.

Fig. 6 illustrates one of the elements or pintles adapted to pivotally and detachably connect one of the units to another. Said element 4 is here shown as in the form of a U-shaped pintle, providing bifurcated arms 5 and 6, of rounded formation, each adapted to slidably enter any of the beads 2 or 3, on any of the units 1, the connector pintle 4 being so formed that, when engaged with two of the units as shown in Fig. 5, the units each may freely pivot around the pintle. It is to be noted that, as illustrated in Fig. 7, the side of the unit which contacts the surface to be treated, is absolutely flat.

The pintles 4 are of such length that they extend outwardly beyond the enclosing beads 2 or 3, and each of the arms 5 and 6 is perforated at its outer end, to receive a cotter-pin 7 whereby to prevent withdrawal of the pintle 4 from the beads. In practice a spacer plate 8, apertured to receive the arms 5 and 6, is placed in the position shown clearly in Fig. 6, prior to the insertion of the cotter

pins 7, the plate resting on top of the relatively soft cotter pin, and preventing the latter from being sheared off by the adjacent edges of the beads.

5 As hereinbefore stated, the stencil plate units 1 may be initially cut to display data of any nature whatsoever, and in any size desired. If the data is to be displayed horizontally, the units are arranged in the alignment illustrated in Fig. 1. In cases where 10 it is desirable or necessary to display the data in vertical alignment the connector pintles 4 are inserted in the ends of the units, instead of at the sides, and arranged as illustrated in 15 Fig. 2, it being noted that the beads 2 and 3 are of the same interior diameter and length, and each adapted to operatively receive the pintles 4.

From the foregoing it will be noted that I 20 have not only provided stencil units equipped with means greatly facilitating the pivotal connection of one unit to the other, to secure the units in aligned parallelism, but that the formation of the beads on the front face of 25 the units permits them to be compacted, the one upon the other. When arranged in the relation shown in Fig. 3, the beads on one unit are in contact with the beads of the next adjacent unit, the rear face of each of said 30 units being in contact with a rear face of another unit. The beads on the front face of one unit are never in contact with the flat rear face of any unit. The compacted assembly of the connected units is desirable because of convenience in storage and transportation. By forming the beads on the 35 front face of the units, I am able to retain the necessarily flat surface of the rear face, and it will be noted that said beads in no manner interfere with the application of the marking fluid, through the cut stencils, to the surface being treated. Furthermore, the same pintles which are used to connect the units horizontally, are equally effective in connecting 45 them vertically.

Another advantage of the specific construction described is that, after the interconnected units 1 are laid in position for the printing operation, the front face of each unit may then be pressed firmly against the surface to be treated, especially along the beads 2 and 3. If, before such pressure is 50 applied, the rear faces of any of the units are not in close contact with the surface being treated, the pressure will cause pivotal movement of the pintles 4, within the beads 2 or 3, and will cause the rear faces of the units to completely contact said surface and thereby insure a better stencilling operation, as will 60 be well understood.

Furthermore, as will be manifest, the formation of the integral beads 2 and 3 impart great rigidity to the structure of the units 1, and prevent them from becoming broken, or 65 distorted out of the flat formation so neces-

sary to correct stencilling work. In some cases, such as in printing large signs, or in lettering traffic instructions on city pavements, the units must necessarily be of considerable size, often as much as two or three 70 feet high and wide, and connected into a letter chain which is often ten to twenty feet long. Under such circumstances the advantages of the possibility of nesting the units will be apparent, since the problem of 75 transportation is greatly simplified, and, in such large units, the beads 2 and 3 are of great service as strengthening braces, as will be understood.

Modifications of the structure herein disclosed will be suggested to those skilled in the art to which this invention pertains, but my invention covers all embodiments falling fairly within the scope of the appended 80 claims. For instance, while I have here disclosed the unit 1 as being of rectangular formation, it would be effective for stencilling work if constructed in the form of a circular disk, as illustrated in Fig. 8, with pintle receiving beads properly formed on or at- 90 tached to its periphery, and projecting vertically and horizontally, although the beads would not be so effective as strengthening reinforcements.

I claim:

1. A stencil unit provided at four diametrically opposed points on its edge, with means for connection to a similarly equipped unit.
2. A stencil unit provided at four diametrically opposed points on its edge, with means 100 for pivotal connection to a similarly equipped unit.
3. A stencil unit provided on its front face, adjacent its margin, with integrally formed strengthening reinforcements.
4. A stencil unit provided on its front face, adjacent its margin, with integrally formed hollow beads, for the purposes described.
5. A stencil unit of rectangular formation provided on all its edges with means adapt- 110 ing it for connection to a similarly equipped unit.
6. A stencil unit of rectangular formation provided on all its edges with means adapt- 115 ing it for pivotal connection to a similarly equipped unit.
7. A stencil unit of rectangular formation, provided on all its edges with an integrally formed hollow bead adapted to strengthen said unit and to afford means for connecting 120 it to a similarly equipped unit.
8. A stencil unit equipped with a hollow bead on each of its side and end margins, in combination with a bifurcated pintle member having parallel arms each adapted to extend 125 into a bead on units arranged in juxtaposition.
9. A stencil unit provided with a hollow bead on each of its side and end margins, in combination with a pintle adapted to extend 130

into any of the beads of any two units, whereby to connect the ends of any two units or the sides of any two units, substantially as described.

5 10. A stencil unit provided with a hollow bead on each of its side and end margins, in combination with a pintle adapted to extend
10 into any of the beads of any two units, whereby to pivotally connect the ends of any two units or the sides of any two units, substantially as described.

11. A stencil unit provided with a hollow bead on each of its side and end margins, in combination with a pintle adapted to extend
15 into any of the beads of any two units, whereby to pivotally connect the ends of any

two units or the sides of any two units, and means for preventing retraction of said arms.

12. A stencil unit equipped with a hollow bead on each of its side and end margins, in combination with a bifurcated pintle having parallel arms each adapted to extend into a bead on units arranged in parallelism, said arms being longer than said beads whereby to permit the ends of the arms to project beyond the bead, a spacer plate fitted over the projecting ends of both arms, and a cotter pin extending through each arm beyond said plate.

In testimony whereof I affix my signature.

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