J. T. WALLACE.

LETTER AND OTHER CHARACTER.

APPLICATION FILED JAN. 9, 1908.

900,969.

Patented Oct. 13, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

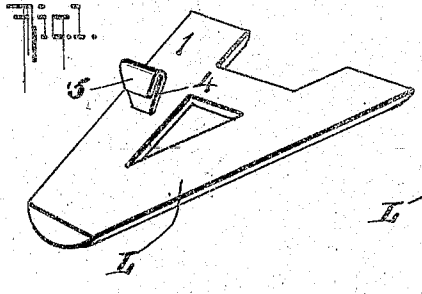


Fig. 2.

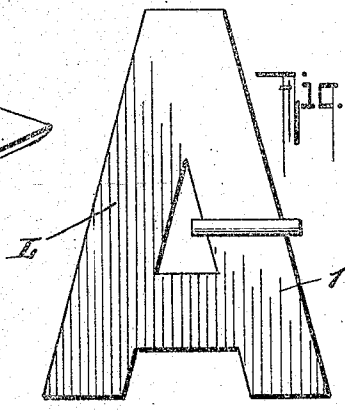


Fig. 3.

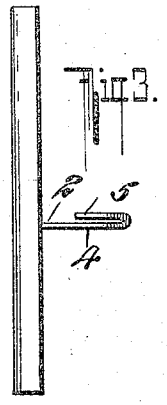


Fig. 4.

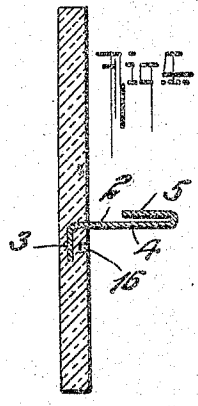


Fig. 5.

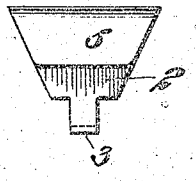


Fig. 6.

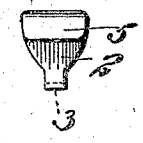


Fig. 7.



Fig. 8.

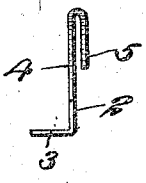
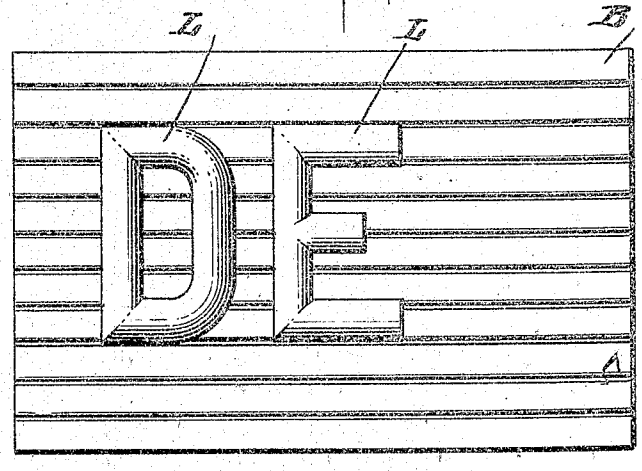


Fig. 9.



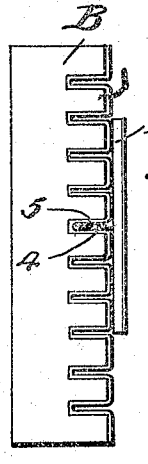


Fig. 10.

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2 SHEETS—SHEET 2.

Fig. 11.

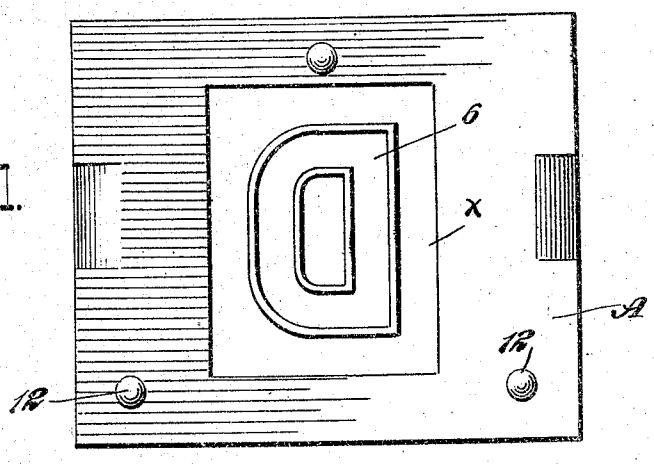


Fig. 12.

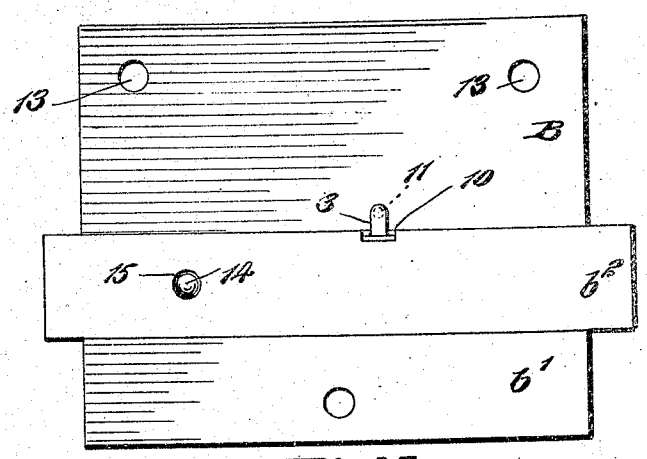
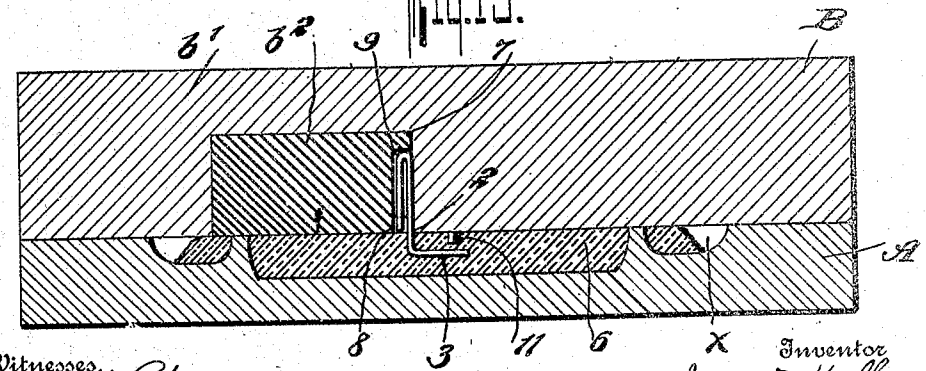


Fig. 13.



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By his Attorneys

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UNITED STATES PATENT OFFICE.

JAMES T. WALLACE, OF NEW YORK, N. Y.

LETTER AND OTHER CHARACTER.

No. 900,969. Specification of Letters Patent. Patented Oct. 13, 1908.

Application filed January 9, 1908. Serial No. 409,912.

To all whom it may concern:

Be it known that I, JAMES T. WALLACE, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Letters and other Characters, of which the following is a specification.

My invention relates to an improved form of letter adapted to be inserted and held in a suitable backing for the purpose of forming a directory, sign, or a like display, the composition of which may be readily altered by the insertion or removal of letters, or which may be entirely removed and a new display substituted. As is set forth in Letters Patent No. 454,769 to William E. Roberts it has heretofore been customary to construct these letters by forming a face of porcelain upon a body of copper or other metal, a rivet being inserted in and projecting at the back of the metal body for the purpose of soldering thereto a narrow wedge formed spring tongue.

It is my purpose to provide a letter formed from a plastic material molded under pressure, in the back of which is securely embedded the shank of a fastener member adapted to be inserted and securely held in a suitable backing board. I provide a fastener member of novel construction embodying the features of strength, simplicity, ease of operation, and absence of wear on the covering of the backing board.

In Figures 11 to 13 inclusive of the drawings herewith and in the description of the same I have shown a form of apparatus for making the letters or other characters which is at present preferred by me. I do not desire, however, to claim such apparatus in connection with the invention set forth in this application, such apparatus and like forms of apparatus being made the subject-matter of a companion application filed of even date herewith.

My invention consists in the construction and combination of parts set forth in, and falling within the scope of the claims hereto appended.

In the accompanying drawings like characters of reference denote like parts in all the figures thereof.

Fig. 1 represents a view in perspective of a letter provided with a fastener member; Fig. 2 represents a rear view in elevation of a letter provided with a fastener member; Fig. 3 represents a side view in elevation of a letter provided with a fastener member; Fig. 4 represents a sectional view in side elevation of a letter provided with a fastener member; Figs. 5 to 7 inclusive represent views in front elevation of fastener members of various sizes; Fig. 8 represents a view in side elevation of a fastener member; Fig. 9 represents a view in front elevation of a backing board with letters inserted; Fig. 10 represents a view in side elevation of a backing board with a letter inserted; Fig. 11 represents a view in top elevation of the lower block member of a preferred form of apparatus for making letters or other characters; Fig. 12 represents a view in elevation of the lower face of the upper block member of a preferred form of apparatus for making letters or other characters; Fig. 13 represents a sectional view in side elevation of a preferred form of apparatus for making letters or other characters.

Turning to a description of my invention in detail, the letter or other character L is formed of a plastic material, preferably celluloid, subjected to heat to bring it into a plastic state and molded under pressure. The pressure will vary with the material used, it having been found desirable to subject plastic celluloid to a pressure of approximately 40 tons, the letter thus obtained being at present preferred by me as being of an enduring quality and adapted to resist the tendency toward loosening of the fastener member under strain. From the back there is embedded in the upright member 1 of the letter, a fastener member provided with a fastener portion 2—3 and a return bend portion 4—5.

Referring to Figs. 5–8 it will be seen that the fastener portion, formed by the tongue 3 turned substantially at right angles to the upright portion 2, is narrow while the return bend portion 4—5 is broadened. By forming the fastener member with a broadened return bend portion not only is it possible to make use of a shorter return bend, but the latter may be made with the point 5 and shank 4 substantially parallel without diminishing the security of the fastener member and letter when the former is inserted in a backing board. The use of this broadened and shortened form of fastener results in a decreased wear on the fabric with which it is customary to cover the backing board, and added ease of insertion and removal. The fastener member is constructed in varying

sizes for use in connection with large or small letters.

In Figs. 9 and 10 are shown the usual form of backing board B consisting of a grooved surface covered with a suitable fabric which extends into the grooves.

In Figs. 11–13 is shown a preferred form of mold or die for use in the manufacture of letters or other characters from celluloid or other plastic material.

The preferred form of die comprises two block members A and B; the member A, or lower member being provided with a recess 6 for the material used, in the form of the letter desired, there being an additional recess x to receive any overflow of the material. The upper member B is formed with a removable portion b^2 adapted to be fitted into the face of the body b'; this removable portion is provided with flanges 7 and 8 on opposite edges of one side of member b^2; in place of the flanges, or in combination with shortened flanges a recess 9 may be formed in the side of member b^2 to provide a seat for a fastener member; the top of the fastener member rests on flange 7 while the bottom or tongue portion projects above the face of b^2 through a cut-away portion 10 of the flange 8. The construction of the flange 7 and of the recess 9 when used is such that, the removable portion b^2 having been fitted into the body b' and the members A and B having been brought together, the projecting fastener portion will be forced into and embedded in the plastic material of which the letter is being formed at a desired location. The members A and B are held in register by pin members 12 mounted on A which enter corresponding apertures 13 formed in B. A pin 14 on b' in like manner enters an aperture 15 in b^2. The body b' is provided with a pin member 11 adapted to be in position under the tongue 3 of the projecting fastener portion when b^2 is fitted into b'; as the fastener portion is forced into the plastic material should the tongue 3 be bent toward the member B by reason of the material not being completely plastic, it will be supported and held in its position substantially at a right angle with the portion 2, by the pin member 11. The pin member 11 also forms an aperture 16 (see Fig. 4) in the back of the letter or character over the tongue portion 3, thereby preventing the formation of air bubbles by providing for the escape of air forced into the plastic material by 3 and also compelling the material to flow into the space made by the passage of tongue 3 and thus secure it in position when the material sets. Heat is preferably applied to the member A in order to secure thorough plasticity of the material and to prevent cooling of the same before the fastener member has become securely embedded therein; for the latter reason member B is also heated before being placed in position on member A.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a character of the class described of a spring fastener member secured thereto of relatively greater width in a horizontal plane at its free end than at its point of attachment to said character.

2. The combination with a character of the class described of a spring fastener member secured thereto, said member increasing in width from a point adjacent its point of attachment to a point adjacent the top of its free end.

3. The combination with a portable character of a fastener member comprising a tongue portion and a relatively broad return bend spring portion.

4. The combination with a portable character of a fastener member provided with a broadened return bend spring portion and a narrow tongue portion embedded in the material of which the character is formed.

5. The combination with a character formed from plastic celluloid of a fastener member comprising a broadened return bend portion and a narrow tongue portion embedded in the celluloid.

6. The combination with a portable character of a fastener member formed with a tongue portion and a relatively broad return bend spring portion having its point substantially parallel with the shank of the fastener.

7. The combination with a portable character of a fastener member formed with a narrow tongue portion secured in the character and a broadened return bend spring portion having its point and shank substantially parallel.

8. The combination with a portable character of a fastener member formed with a turned tongue portion embedded in the material of which the character is formed and a relatively broad portion extending above the material and turned to form a return bend spring with point and shank substantially parallel.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

JAMES T. WALLACE.

Witnesses:
T. E. HARDENBERGH, Jr.,
W. A. PAULING.