J. T. WALLACE.

APPARATUS FOR MANUFACTURING LETTERS AND OTHER CHARACTERS.

APPLICATION FILED JAN. 9, 1908.

909,487. Patented Jan. 12, 1909.

Fig. 1.

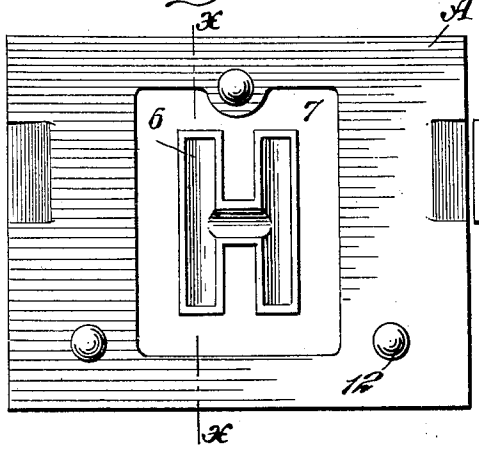


Fig. 2.

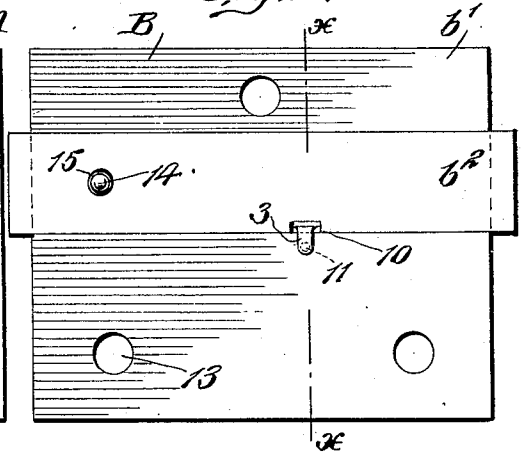


Fig. 5.

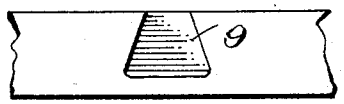


Fig. 3.

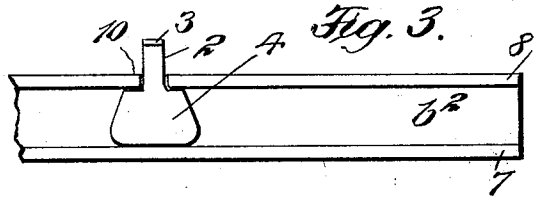
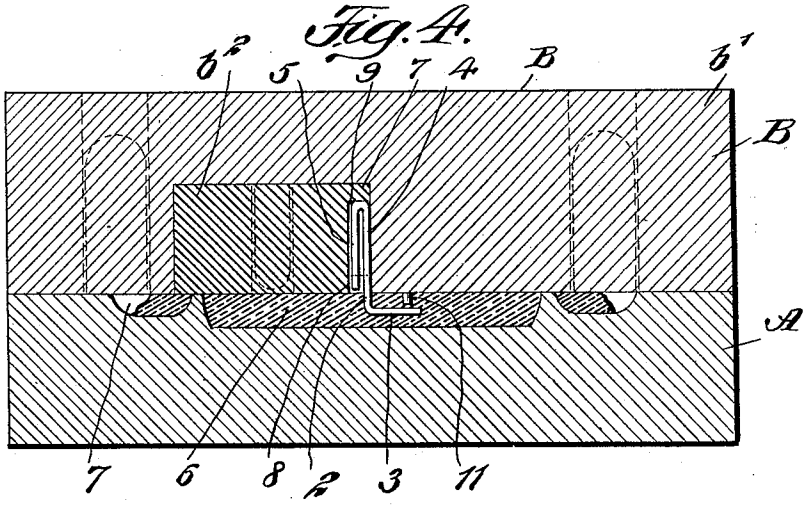


Fig. 4.



Witnesses

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APPARATUS FOR MANUFACTURING LETTERS AND OTHER CHARACTERS.

No. 909,487. Specification of Letters Patent. Patented Jan. 12, 1909.

Application filed January 9, 1908. Serial No. 409,911.

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 Apparatus for Manufacturing Letters and other Characters, of which the following is a specification.

My invention relates particularly to an improved form of apparatus for the forming from plastic material of portable letters or other characters provided with fastener members adapted to be inserted in a backing board for the purpose of forming words in advertisements, directories or other displays; the which form of letters or other characters and manner of making the same is the subject-matter of my companion application filed of even date herewith.

My improved apparatus embodies the advantages of strength and simplicity of construction, ease and rapidity of operation, and the accurate and secure location of a fastener member in the letter or character formed.

I do not desire to limit myself to the exact form of apparatus described herein, and shown in the drawings herewith, my invention consisting in the construction, disposition and combination of parts set forth in and falling within the scope of the claims hereto appended.

Like characters of reference denote like parts in all the figures of the drawings.

Figure 1 represents a view in elevation of the upper face of the lower block member; Fig. 2 represents a view in elevation of the lower face of the upper block member; Figs. 3 and 5 represent views in side elevation of the removable bar member of the upper block member; Fig. 4 represents a sectional view in end elevation taken on lines x—x of Figs. 1 and 2.

My improved apparatus comprises a lower block member A and an upper block member B. The lower block member A is provided with the recess 6 of desired form for the reception of the material used; this material may be inserted when in a plastic state and is preferably heated when in the mold in order that it may not cool before the construction is completed. Around the recess 6 is an additional recess 7 to receive any overflow of the material from 6. The upper block member is formed with a flat lower face and comprises a body block b' provided with a removable bar member b^2 adapted to be fitted into the face of the body block b'; the member b^2 is provided with flanges 7 and 8 on opposite edges of one side of the member b^2; in place of the flanges as described or in combination with shortened flanges a recess 9 as shown in Fig. 5 may be formed in the side of member b^2 to provide a seat for a fastener member as will hereafter be described.

A fastener member preferably of the form shown with substantially right angle tongue 3 and broadened return bend portion 4—5 is placed in position with the return bend portion resting on flange 7 and the portion 2—3 or tongue portion projecting above the face of the member b^2 through an aperture 10 in flange 8; by the use of a recess 9 conforming to the shape of the return bend portion of the fastener member a more secure seat for such a member is secured and a bar may be provided with suitable recesses for the reception of a plurality of fastener members of varying sizes, which sizes, beyond certain limits, could not be advantageously adjusted in a bar provided only with flanges of uniform size. In place of a plurality of recesses of varying sizes, however, the flange 7 may be made of increased depth when desired in order to secure the suitable projection through the aperture 10 of the tongue portion of a fastener member of smaller size. The outer face of member b^2 is provided with a pin member 11 so situated that it will be under the tongue 3 of the fastener member.

The member b^2 having been inserted in the body b', is held in position by the pin 14 projecting from the body and entering the aperture 15 in member b^2. The recess 6 having been filled with the plastic material the member B is placed upon the member A in such a manner that the tongue portion 3 of the fastener member will be embedded in a desired location in the letter or character which is to be formed; proper register of members A and B is secured by means of pin members 12 on A entering apertures 13 in B. Should the

tongue 3 be pressed toward the member B by the sudden cooling of the material the pin member 11 will support the tongue and retain it in its proper position. It is because of this tendency to cool suddenly upon contact with the upper member B, that it is preferable to heat the material while in member A; and also to heat member B before it is placed upon member A; the pressure applied to member B may be varied as required according to the plastic material used but the use of a considerable pressure is preferred as securing a letter or character of solid and permanent construction with the fastener member firmly embedded therein. The pin member 11 entering the plastic material behind the tongue 3 provides an aperture in the material for the escape of any air that may be carried in by the tongue and compels the flow of the material into the space made by the passage of the tongue 3, a lock being thereby formed against the escape of tongue 3 when the material is set.

In the manufacture of any considerable number of letters or characters it is preferable to increase the size of the block-members A and B to a desired extent, providing formed recesses for a plurality or letters or characters of uniform or varying sizes, and using one or more removable members b^2 each provided with flanges or a plurality of recesses, or both, adapted to receive fastener members of a size corresponding to that of the respective letters or characters in which they are to be embedded.

In the construction of letters or other characters from plastic material as above described it has been found preferable to use celluloid heated in the mold and subjected to a pressure of approximately 40 tons.

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

1. In an apparatus of the class described, a block member provided with a recess, a second block member comprising a removable portion inserted therein, and a recess in the second block member adapted to receive a fastener member.

2. In an apparatus of the class described, a block member, a recess in said block member, a second block member comprising a removable portion inserted therein, and a recess in said second block member adapted to receive a fastener member, said removable portion being adapted to hold the fastener member in position.

3. In an apparatus of the class described, a block member provided with a recess adapted to receive material to be formed, a second block member provided with a removable member adapted to receive a fastener member, and a pin member on said second block member adapted to enter the recess in said first block member when said block members are in operative position.

4. In an apparatus of the class described, a block member provided with a recess, a second block member provided with a removable member inserted therein, and a flange adjacent one edge of said removable member.

5. In an apparatus of the class described, a block member provided with a removable member, a flange adjacent one edge of said removable member, and a recess in said removable member adjacent said flange, said recess being adapted to receive a fastener member.

6. In an apparatus of the class described, a block member provided with a recess, a second block member provided with a removable member, a flange adjacent one edge of a side of said removable member and a second flange adjacent the opposite edge of said side.

7. In an apparatus of the class described, a block member provided with a recess, a second block member provided with a removable member inserted therein and a recess in said removable member adapted to receive a fastener member.

8. In an apparatus of the class described, a block member provided with a recess, a second block member provided with a removable member, a flange adjacent one edge of a side of said removable member, a second flange adjacent the opposite edge of said side and an aperture in said second flange.

9. In an apparatus of the class described, a block member provided with a recess, a second block member provided with a removable member, a flange adjacent one edge of a side of said removable member, a second flange adjacent the opposite edge of said side, and a recess adjacent said flanges.

10. In an apparatus of the class described, a block member provided with a recess adapted to receive material to be formed, a second block member, a removable member in said second block member adapted to receive a fastener member, and a pin member on said second block member located below said fastener member when said removable member is in place.

11. In an apparatus of the class described, a block member adapted to receive a plastic material, a second block member adapted to receive a fastener member, means for inserting the fastener member in the material, and means for causing the material to envelop said inserted member, said last-mentioned means comprising a pin carried by said second block member and adapted to enter the material adjacent said inserted member.

12. In an apparatus of the class described, a block member provided with a recess

adapted to receive material to be formed, a second block member adapted to receive a fastener member formed with an angle tongue portion adapted to enter said material when the block members are in position, and means for supporting said tongue portion of the fastener member.

13. In an apparatus of the class described, a block member comprising a removable portion inserted therein, a recess in said block member adapted to receive a fastener member, and a pin carried by said block member adjacent said recess.

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

JAMES T. WALLACE.

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